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Assessment of Knowledge regarding Hepatitis B among Medical Students in Rangaraya Medical College, Kakinada, East Godavari District, Andhra Pradesh

Sujatha. P and K. Sowmya Sudha

Department of Community Medicine, Rangaraya Medical College, Kakinada

Abstract: The aim of the study is to determine the knowledge of under graduate medical students about Hepatitis B. The study will add up to the existing literature in context to Hepatitis B.

Key words: Hepatitis B , medical students.

Introduction

Hepatitis-B is the world's most common blood borne viral infection¹, accounting for 2 billion infections, 350 million carriers² and 6 lakh deaths annually. The virus is transmitted mainly by blood, and the complications of infection are chronic hepatitis, cirrhosis, and hepatocellular carcinoma. Approximately 100 million hepatitis B carriers, more than 5.6% of the total population, live in the Member countries of the WHO South-East Asia Region. More than 300 000 people are estimated to die each year due to the chronic consequences of hepatitis B, particularly cirrhosis and liver cancer³. It has been clearly documented that HBV is far more infectious than HIV in occupational health care settings⁴. Fortunately Hepatitis –B virus infection is largely preventable by vaccination. Transmission of infection is rare in persons who have been immunized.

INDIA-2-5% of general population are infected and 40-45 million carriers, 5000 deaths occur annually due to the disease. 80% of hepatocellular carcinoma is associated with hepatitis-B virus. Apart from the Government's efforts, awareness of the disease and its prevention among health professionals and health care workers is crucial for the control of hepatitis B infection and spread, and for better coordination with the health authorities. Medical students are the future health professionals and their knowledge. Regarding the disease, transmission and prevention is essential for good patient care. Immunization clinic is being conducted every Saturday in the department of community medicine in Rangaraya medical college Kakinada. Hepatitis-B awareness campaign is conducted for every batch in their 3rd semester. Hence this study was performed to assess the knowledge about hepatitis B among medical students and also to compare their knowledge.

Objectives: 1. To assess the knowledge of medical students about Hepatitis-B. 2. To compare the knowledge between 4th semester & 6th semester students.

Materials and methods:

Study design-Cross sectional study, Sample size-267(143- 6th semester and 124- 4th semester students)

Sampling method-Convenient sampling, and Tool- semi- structured pre- tested questionnaire is administered.

Statistical analysis of the results was performed by epi-info 2007. The chi-square test was used to compare the rates of correct answers among both the groups.

The study was conducted in a government medical college (Rangaraya medical college), Kakinada during the time period between October to December 2011. There were a total of 267 students. Of them 143 from 6th semester and 124 from 4th semester batch. Of the 143 students of 6th semester, 64 boys and 79 are girls; 42 boys and 82 are girls in the 4th semester.

Pre-designed and semi-structured questionnaire was administered. Each questionnaire was composed by 20 questions, which were given in four sections.

These are 1. general knowledge on hepatitis-B disease. 2. transmission of virus. 3. prevention of the disease. 4. personal data about vaccination.

Results

Student's knowledge in each of the four sections of the questionnaire.

1. General knowledge on HBV and disease and also transmission

| Students group | Number of students | Hep-B preventable disease | Complications of HBV | Availability of PEP | Transmission of disease | Carrier state |
|--------------------------|--------------------|---------------------------|----------------------|---------------------|-------------------------|---------------|
| 4 th semester | 124 | 88% | 20% | 16% | 70% | 31% |
| 6 th semester | 143 | 95% | 73% | 53% | 85% | 54% |
| Total | 267 | 91.5% | 46.5% | 34.5% | 77.5% | 42.5% |
| p-value | | 0.01 | 0.001 | 0.001 | 0.01 | 0.001 |

Statistical analysis of the results in the knowledge of the students in all the four sections regarding Hepatitis disease is found to be significantly high among clinical students^{5,6}.

Firstly students were asked about the types of Hepatitis B, can it be prevented, complications of the disease, availability of Post exposure prophylaxis, the various modes of transmission⁷ and existence of carrier state.

Majority of the students in both groups are aware of the types of disease and it is a preventable disease.

3. Knowledge of prevention & personal data about vaccination

| Student groups | Number of students | Prevention by vaccine | Availability of vaccine | Contraindications to vaccine | Screening status | Personal vaccination status |
|--------------------------|--------------------|-----------------------|-------------------------|------------------------------|------------------|-----------------------------|
| 4 th semester | 124 | 88% | 16% | 1% | 5% | 30% |
| 6 th semester | 143 | 95% | 53% | 31% | 12% | 84% |
| Total | 267 | 91.5% | 34.5% | 16% | 8.5% | 57% |
| p-value | | 0.01 | 0.01 | 0.001 | 0.001 | 0.001 |

As far as the knowledge about prevention, the students knew that vaccination is available⁸ and it can prevent the disease and the number of doses to be taken, but they are unaware of the free of cost availability and the cost of the vaccine (27%). Poor knowledge is observed regarding contraindications to vaccine and their Hepatitis-B infectivity status.

Occupational risk of Hepatitis B is well known in medical workers. Actually, occupational exposure during undergraduate medical school may involve between 11% to 50% of students.⁹ Only 30% of the 4th semester students have taken the vaccine when compared to 84% of the 6th semester students.

Conclusions:

Mean age of 4th semester students is 19.1 yrs and that of 6th semester students 21.3 yrs. Knowledge regarding the cause, types of hepatitis and availability of vaccination was good among both the study groups. There is a lack of awareness among medical students of 4th semester when compared with 6th semester, in aspects like modes of spread, high risk groups, complications, carrier state, immunity, PEP, vaccination status.

Both groups lack knowledge regarding contraindications to vaccine and PEP after sustaining needle stick injuries.

Recommendations:

It is the need of the hour to emphasize on continuing medical education programmes periodically to improve and update the knowledge of hepatitis B.

Seminars, programmes & workshops should be conducted for the medical Students to update their knowledge regarding Hepatitis-B which ultimately can help in preventing health care associated viral hepatitis, improving screening care and treatment of the disease and protecting from infection through vaccination.

A policy has to be implemented for provision of free vaccination against Hepatitis-B. Compulsory & complete vaccination is advocated for all medical students (high risk group) at the time of entry into medical college.

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