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PREVENTION OF HEPATITIS B; KNOWLEDGE AND PRACTICE AMONG FIRST YEAR MBBS STUDENTS

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ABSTRACT... Objective: To assess the knowledge and practice of first year MBBS students, for the prevention of Hepatitis B. **Design:** Descriptive study. **Place and Duration of study:** The study was conducted at Lahore Medical & Dental College, Lahore. The data was collected in two weeks in December, 2006. **Methodology:** A total of 50 students were recruited using a non probability random sampling technique, through the lottery method. A pre-tested structured questionnaire was administered to collect information about the knowledge and practice of students about the prevention of hepatitis B. Data was presented in the form of simple tables and graphs. **Results:** Out of 50 students, majority (96%) responded that it was a disease of liver. Regarding knowledge about the communicability of Hepatitis B, 78% said it was communicable, 19% assumed that it was water borne. Other responses included spread via blood transfusion (28%), through use of injection (21%), close physical contact (8%) and un-hygienic conditions (18%). For prevention of Hepatitis B, the more common responses were, provision of clean water (24%), improvement in hygiene (27%), restriction to single sex partner (6%), avoidance of sharing syringes and needles (19%), screening blood before transfusion (9%) and vaccination (15%). The high risk group was identified as the poor people living in unhygienic conditions (34%), surgeons (32%), barbers (12%), Intravenous drug users (8%), recipient of blood transfusion (6%) and uneducated people (6%). Only 1 respondent (2%) said that sex workers could be at risk of getting this disease. When inquired about their vaccination status, 66% of students admitted to have been vaccinated against Hepatitis B, while 34% of have not been vaccinated. **Conclusion:** The present study concludes that there is lack of awareness among the medical students entering into the profession about the hazards of Hepatitis B, its routes of spread and its modes of prevention. Similarly, all the students were not vaccinated against Hepatitis B, which made them very vulnerable to this disease.

Key words: Hepatitis B, Prevention, Awareness, Immunization status.

INTRODUCTION

Hepatitis is an inflammation of the liver and may be caused by the Hepatitis B virus (HBV). The hepatitis B virus (HBV), discovered in 1966, infects more than 350 million people worldwide¹. Hepatitis B virus is a leading cause of chronic hepatitis, cirrhosis, and hepatocellular carcinoma, accounting for 1 million deaths annually. Its prevalence approaches 10% in hyperendemic areas, such as southeast Asia, China, and Africa, more than 8 percent are chronic carriers of the virus, the result of either neonatal transmission (vertical) or transmission from one child to another (horizontal)². Of the estimated 50 million new cases of hepatitis B virus (HBV) infection diagnosed annually, 5–10% of adults and up to 90% of infants will become chronically infected, 75% of these will be in Asia where hepatitis B is the leading cause of chronic hepatitis, cirrhosis and hepatocellular carcinoma³. Although chronic HBV infection is seen less frequently in North America and Europe, an estimated 1.25 million persons in the United States are infected².

The virus is spread by direct contact with the blood, serum, or sexual fluids of an infected person. This can happen by sharing needles or having un-protected sexual contact with hepatitis B patient. Infected women can pass the virus to their babies. Other, less frequent causes of infection include household contact, hemodialysis, transmission from a surgeon, and receipt of organs or blood products⁴. Immigration, cheap air travel, and globalization are all factors contributing to a worldwide spread of hepatitis B virus⁵.

To prevent the occurrence of Hepatitis B, the Advisory Committee on Immunization Practices, in 1991, recommended universal vaccination of infants against hepatitis B virus (HBV), with series initiation within days of birth⁶. This is strengthened by the fact that because most HBV infections occur during infancy or early childhood, vaccination of infants beginning at birth is the key strategy for preventing chronic HBV infection. Vaccination of high risk groups like drug users, surgeons and other medical personnel is also recommended⁷.

Hepatitis B is the most important infectious occupational

disease for medical students and health care workers. The magnitude of the problem can be gauged from the fact that 4.4 million Health Care Workers in the US receive approximately 800,000 needle sticks and other injuries from sharp objects annually⁸. However, the awareness among medical students about the hazards of Hepatitis B is still limited^{9,10}. Similarly, the vaccination status of medical students who are constantly at risk of getting this infection, is reported to be low^{10,11}.

OBJECTIVES

To assess the knowledge and practice of first year MBBS students, for the prevention of Hepatitis B.

METHODOLOGY

A Descriptive study was conducted among first year students of Lahore Medical & Dental College, Lahore. A total of 50 students were recruited using a non probability random sampling technique, through the lottery method. A pre-tested structured questionnaire was administered during a 2 week period in December 2006, to collect information about the knowledge and practice of students about the prevention of hepatitis B. Data was presented in the form of simple tables and graphs.

RESULTS

Knowledge about Hepatitis B

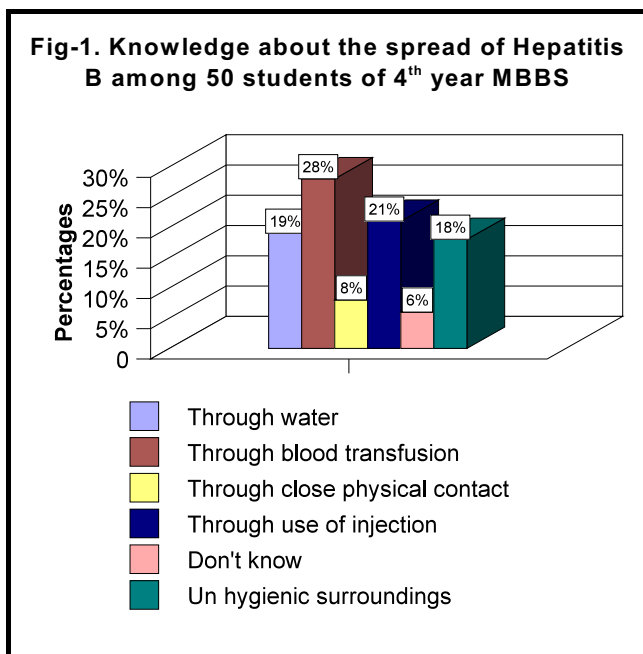
When asked about Hepatitis B, out of 50 students, majority (96%) responded that it was the disease of liver.

Knowledge about the Communicability of Hepatitis B

On inquiry into their knowledge about the communicability of Hepatitis B, 39 students (78%) said it was communicable, 8 of them (16%) considered it to be non communicable, while 3 students (6%) did not know about the communicability of the disease.

Knowledge about the spread of Hepatitis B

As depicted in Figure 1, 14 students (19%) assumed that Hepatitis B is spread through water. Popular responses included spread of the disease via blood transfusion (28%), through use of injection (21%), through close physical contact (8%) and because of un-hygienic surroundings (18%).



(6%), avoidance of sharing syringes and needles (19%), screening blood before transfusion (9%) and vaccination (15%).

As given in Table 1, when asked about the people at risk of getting Hepatitis B, 17 students (34%) responded that poor people living in unhygienic conditions were at risk, 16 of them (32%) named surgeons to be susceptible, 6 respondents (12%) thought barbers were vulnerable and 4 students (8%) named intravenous drug users as people at risk. Among the students, 3 (6%) thought recipient of blood transfusion and similar number assumed that uneducated people were prone to get Hepatitis B. Only 1 respondent (2%) said that sex workers could be at risk of getting this disease.

Vaccination status of 1st year Medical Students

When inquired about their vaccination status, 33 students (66%) admitted to be vaccinated against Hepatitis B, while 17 of them (34%) have not been vaccinated.

People most likely to get Hepatitis B

Table-I. Knowledge about People most likely to get Hepatitis B among 50 students of first year MBBS

Options	Number	%age
Poor people living in un hygienic conditions	17	34%
Surgeons	16	32%
Barbers	6	12%
Intravenous drug users	4	8%
Recipient of blood transfusion	3	6%
Uneducated people	3	6%
Sex workers	1	2%
Total	50	100%

Knowledge about prevention of Hepatitis B

When inquired about the preventive measures for Hepatitis B, Use of clean water (24%) and improvement in hygiene (27%) were more common responses. The other answers included, restriction to single sex partners

DISCUSSION

In the present study there was generalized awareness among the first year MBBS students, that Hepatitis B affects the liver (96%) and 78% of the respondents agreed that Hepatitis B was a communicable disease. The mode of spread of disease was not very clear to students. Spread of Hepatitis B, via infected blood used for transfusion and infected injection needles were mentioned by 28% and 21% of students respectively. Water (19%) and unhygienic surroundings (18%) were also mentioned as route of spread of this disease. This was in contrast to a study conducted in a private medical college at Karachi, where almost all clinical students (95%) knew that blood transfusion was an important source of transmitting Hepatitis B⁹. In the present study, use of clean water (24%) and improvement in hygienic conditions (27%) were the preventive measures most commonly mentioned by the students. Avoidance of sharing syringes and needles (19%), vaccination (15%), screening of blood before transfusion (9%) and restriction to single sex partners (9%) were less common responses. In a similar study conducted by Anjum and his colleagues in Karachi, better responses were obtained, like wearing gloves (87%) and safe disposal of

sharps waste (98%)⁹.

The students in the present study believed that poor people living in unhygienic conditions (34%) and surgeons (32%) were mostly at risk of getting Hepatitis B. Few students thought barbers (12%), Intravenous drug users (8%), recipients of blood transfusion (6%) and sex workers (2%) could contract Hepatitis B. It is common information and many studies have concluded that compared to other health care workers, medical students were more at risk of exposure to risk factors of Hepatitis B, especially per-cutaneous injuries^{8, 12,13,14,15,16,17,18}. However, none of the respondents in the present study named medical students as one of the high risk groups.

In the present study, 66% of students interviewed were vaccinated against Hepatitis B. This was higher than the vaccination status of 42% reported among medical students at Allama Iqbal Medical College, Lahore (Nasir et al., 2000) and the vaccination status of (26%) in a similar study conducted in Bombay¹⁹. However, in the present study vaccination status of medical students was lower than the vaccination rate of 80% in medical students, highlighted by a similar study conducted in Orissa, India¹⁰.

CONCLUSION

The present study concludes that there is lack of awareness among the medical students entering into the profession about the hazards of Hepatitis B, its routes of spread and its modes of prevention. Similarly, all the students were not vaccinated against Hepatitis B, which made them very vulnerable to this disease.

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