

KNOWLEDGE ATTITUDE AND PRACTICE REGARDING HEPATITIS B INFECTION AMONG HOSPITAL STAFF NURSES IN HAYATABAD MEDICAL COMPLEX, PESHAWAR

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ABSTRACT

OBJECTIVE: To assess the knowledge, attitude and practice regarding hepatitis B virus (HBV) infection among nurses working in a public hospital of Peshawar, Pakistan.

METHODS: This descriptive, cross sectional was conducted on 100 (96 females, 4 males) staff nurses of Hayatabad Medical Complex, Peshawar, Pakistan, from 15th November 2010 to 15th January 2011. The sampling technique was simple random sampling. Qualitative variables were analyzed by calculating means and standard deviations. Quantitative variables were analyzed by calculating frequencies and percentages.

RESULTS: The mean age of the respondents was 34.8 ± 9.5 years. Sixty one percent had job duration >4 years. Previous source of knowledge about HBV, during nursing training school was 91% through workshops. Knowledge about HBV infection was 94%. 95% responded that it spread through blood transfusions. Ninety-six percent responded that they do not have separate dressing sets for hepatitis B patient. The practice of vaccination against HBV in nurses was 66% and use of disposable gloves while handling hepatitis B patient was 45%. Increase in duration of job was significantly associated with knowledge about hepatitis B virus and its spread (p -value <0.001). Intravenous cannulas and syringes were properly discarded with increasing job experience (p -value <0.001). Nurses with job duration of more than four years used gloves while handling hepatitis B patient (p -value <0.001).

CONCLUSION: Knowledge of hospital staff nurses regarding HBV infection was adequate. The attitude of the hospital staff nurses regarding HBV infection was good. The practices of the hospital staff nurse regarding HBV infection were very poor.

KEY WORDS: Knowledge (MeSH), Attitude (MeSH), Practice (Non-MeSH), Nurses (MeSH), Hepatitis B (MeSH), Healthcare worker (Non-MeSH).

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INTRODUCTION

Hepatitis B is a viral infection that attacks the liver and can cause both acute and chronic disease.

The virus is transmitted through contact with the blood or other body fluids of an infected person¹. According to WHO, Hepatitis B virus (HBV) can cause an acute illness with symptoms that

last several weeks, including yellowing of the skin and eyes (jaundice), dark urine, extreme fatigue, nausea, vomiting and abdominal pain². Hepatitis B is an important, infectious, occupational hazard for healthcare workers who are exposed to human blood. People who are at risk include healthcare workers (HCWs) in contact with blood and human secretions, hospital staff nurses, oncology and chemotherapy nurses. They all are at risk of needle stick/sharps injuries³. The high risk of hepatitis B infection is due to the high prevalence of the Hepatitis B virus carriers in the population⁴. The infected victims, the hospital staff nurses, not only suffer considerable harm, but may sometimes also inadvertently transmit the infection to patients they care for. The consequences of HBV infection are potentially fatal and include chronic liver disease, cirrhosis, and primary hepato-cellular carcinoma (HCC).⁵

The staff of health providing services in which the hospital staff nurses comes on the top level, should be familiar not only with treatment but also with epidemiological aspects of diseases such as transmission, prevention and control. Therefore, it is vital to study the level of information of this group regarding Hepatitis B infection, one of the most prevalent infectious diseases. General knowledge of health staff about viral hepatitis and its transmission and prevention can stop the spread of this disease in hospitals and in society.⁶ Hospital staff nurses are usually dealing with blood and blood related product and are at high-risk of getting infections. After completing the 4 years of nursing training, the nurses

are allowed placed in wards for practice and clinical experience. They are the most vulnerable among the HCWs who are prone to get infections from the patients or transfer infections to other patients. Most of them are unaware of hepatitis B infection. There is a lack of knowledge regarding Hepatitis B among them due to lack of training programs in between their general training. There are no workshops or seminars for nurses regarding Hepatitis B, in which they are taught about the infection cause, spread and modes of transmission.

Few studies have been conducted regarding hepatitis B among hospital staff of public hospital. This study will further contribute to control the infection. This study was conducted to assess the knowledge, attitude and practice regarding hepatitis B infection among nurses working in Hayatabad Medical Complex Peshawar, Pakistan.

METHODS

This descriptive, cross sectional was conducted on staff nurses at Hayatabad Medical Complex, Peshawar, Pakistan, from 15th November 2010 to 15th January 2011.

There were total of 226 staff nurses, of which 100 were selected on the criteria that they had done four years training of general nursing and were called staff

or charge nurses. Some nurses had done other additional qualifications like mid-wifery, BSc nursing, B.A, M.A.

Non-probability convenient sampling was done. Before collecting data, purpose of the study was explained and informed written consents was obtained from the study participants. Approval from the ethical board of Khyber Medical University, Peshawar and Hayatabad Medical Complex, Peshawar was taken before planning and implementing data collection. Nurses were interviewed through structured questionnaire regarding their knowledge, attitude and practice of hepatitis B infection. The questionnaire was pre-tested before adopting a final version.

Data were analyzed using SPSS version 16.0. Continuous variables like age, duration of experience were described as Mean Standard Deviation. In the case of categorical variables like gender and questions about knowledge and practices were described as frequencies and percentages.

RESULTS

There were ninety six (96) female and four (4) male nurses. The average age was 34±9 years. Sixty one percent (61%) had job duration of more than four years. Twenty four nurses (24%) had job duration of 2 to 4 years. Fifteen nurses (15%) had job duration of 1 to 2 years.

KNOWLEDGE

Ninety four percent of the nurses answered that they know about HBV infection. According to present study, 91% have knowledge about hepatitis B during training in nursing school. 8% told that they got the knowledge about hepatitis B from workshops/seminars during nursing training. 1% got the knowledge from workshops after training. Sixty seven percent of the hospital nurses have knowledge about hepatitis B vaccination and thirty three said that they do not know about the vaccination.

ATTITUDE

According to present study, ninety eight percent of the nurses responded that hands should be washed with antiseptic solution after attending the hepatitis B patient. Two percent replied “No” to this question. Hundred percent of the nurses responded positive to the question that there should be separate dressing sets for hepatitis B patient. Hundred percent of the nurses responded that rooms should be disinfected when HBV infected patient gets discharged from that room.

PRACTICE

According to present study, 7% of the nurses replied that they keep HBV infected patient in isolated room. Sixty five percent of the nurses replied that

TABLE 1: RELATION BETWEEN PRACTICE OF NURSES VACCINATION AGAINST HEPATITIS B VIRUS (HBV), USING DISPOSABLE GLOVES, DISCARDING OF DISPOSABLE SYRINGES, KNOWLEDGE ABOUT HBV, KNOWLEDGE ABOUT HBV INFECTION WHILE HANDLING HBV PATIENT AND DURATION OF JOB

Parameters		1-2 years	2-4 years	>4 years	Chi-square test	P value
Vaccination Against Hepatitis B	Yes	1	5	61	82.36	<0.001
	No	15	19	1		
Use of disposable gloves	Yes	1	1	15	52.31	<0.001
	No	15	24	16		
discarding of syringes	Yes	1	1	46	54.46	<0.001
	No	15	24	15		
Knowledge about HBV	Yes	13	24	61	11.56	<0.003
	No	2	1	1		
Knowledge about HBV infection	Yes	9	24	61	36.17	<0.001
	No	6	1	1		

they use separate dressing sets for HBV infected patients. Forty five (45%) nurses replied that they use disposable gloves while taking blood from HBV infected patient. Four percent replied that they use disposable towels for HBV infected patients. Sixty six (66%) of the nurses responded that they had vaccination against HBV and the remaining thirty four (34%) were not vaccinated against HBV.

Our result shows that nurses with job duration of more than four years have a better knowledge about hepatitis B virus infection i.e. 61%, as compared to those nurses with less job experience. (p-value <0.001) (Table: 1).

When knowledge of hepatitis B virus infection spread was assessed, nurses with job duration of more than four years were well aware of it i.e. 61% as compared to those with lesser duration of job (p-value <0.003).

Our result shows that nurses with job duration of more than four years properly discard syringes/cannulas after use on HBV patient i.e. 75.4%, while nurses with less job duration never take these precautions (p-value <0.001).

The result shows that the use of disposable gloves while handling HBV patient was high, i.e. 73.8% in nurses with job duration of more than four years, as compared to those nurses with less job duration. (p-value <0.001).

Our result shows that nurses with the job duration of more than four years have done hepatitis B virus vaccination i.e. 61%, while this practice is extremely low in nurses with less job duration. (p-value <0.001).

DISCUSSION

In the present KAP study regarding Hepatitis B infection among staff nurses of a Public hospital in Peshawar KPK, one hundred staff nurses were interviewed. The result shows that the nurse's knowledge and attitude regarding use of separate dressing sets for Hepatitis B patients are not very encouraging. The problem

among hospital staff nurses is that they do not take specific precautions while taking blood from hepatitis B patients. They do not have the idea that they can get needle pricks from the discarded needles/syringes and it can cause harm to them. Disposable towels are used in the operation theaters.

The result shows that less than half of the nurses are not vaccinated against hepatitis B (Table 1). These findings favour the results of Mengal HR et al, showing only 37.2% of student nurses being completely vaccinated against HBV.⁷

They are prone to get the infection from the patients and subsequently they are the source through which they can transmit the infection to other patients. According to WHO recommendations, all nurses working in a hospital should be vaccinated against hepatitis B. Under current European Union (EU) legislation, all employers have to perform a risk assessment of their workers to identify those exposed to HBV, explain them the risk, and offer vaccination⁸. Moreover, vaccination should be given as early as possible after the start of their career in order to avoid Hepatitis B infection and its long-term consequences. Published Hepatitis B vaccination coverage figures in nurses in Europe are somewhat higher than those presented in North American studies⁹; recent report showed US hepatitis B virus vaccination coverage to amount to 75%, while a Canadian study revealed that 10-60% of all nurses performing exposure-prone procedures were not vaccinated against Hepatitis B¹⁰. This illustrates that aiming at increasing hepatitis B vaccination coverage among nurses remains a challenge. A study was conducted in Punjab India, concluded that there is an urgent need to increase the quality and level in the training program among Health Care Workers to prevent the spread of the virus¹¹. Another Indian study showed that in spite of having good knowledge regarding HBV, the practice of nurses for prevention against

the virus is not satisfactory¹². A study in Bangladesh conclude that compared to the knowledge of nurses regarding HBV, their preventive practices were very low¹³.

It is concluded that despite the fact that adequate knowledge of hospital staff nurses regarding hepatitis B infection the practices of the hospital staff nurse regarding Hepatitis B infection were not satisfactory.

RECOMMENDATIONS

- Seminars/workshops should be arranged regarding HBV infection during the training years and after the general nursing training. These workshops should be made mandatory for the nurses so that they become well aware of the infection spread. The stress should be to properly dispose off the used syringes, cannulas and other sharp objects.
- HBV infected patient should be kept in isolation room so that nurses take specific precautions before attending the patient. In case of non-availability of isolation rooms, nurses should mark the patient with sign board for their recognition.
- Hepatitis B vaccination should be made mandatory for nurses in their training and they should be screened for hepatitis B virus antigen before appointment in the hospital.

LIMITATIONS

It was a descriptive study and proper comparison cannot be done in descriptive studies. It is recommended that further analytical studies may be conducted to estimate the reasons for poor attitude and practice.

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CONFLICT OF INTEREST

Authors declared no conflict of interest

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AUTHOR'S CONTRIBUTION

Following authors have made substantial contributions to the manuscript as under:

KHK: Concept, acquisition of data, drafting the manuscript, final approval of the version to be published

AA: Study design, drafting the manuscript, final approval of the version to be published

HH & IQ: Acquisition, analysis and interpretation of data; final approval of the version to be published

ANN: Critical revision, Drafting the manuscript, final approval of the version to be published

Authors agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

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