



STUDY OF KNOWLEDGE, ATTITUDE AND IMMUNIZATION STATUS OF HEPATITIS B AMONG STAFF NURSES AT CHHATTISGARH INSTITUTE OF MEDICAL SCIENCES, BILASPUR

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ABSTRACT

Background-There is a paucity of population-based epidemiological information regarding hepatitis B virus (HBV) infection in India. According to the WHO report on prevention of HBV in India, HBsAg prevalence among general population ranges from 0.1% to 11.7%, being between 2% and 8%, in most studies. HBV infection is a well-recognized occupational risk for Staff nurses. Studies have shown that of the Staff Nurses who sustained injuries from needles contaminated with blood containing HBV.

Objectives-To assess the knowledge about Hepatitis B infection among Staff nurses. To assess the attitude regarding Hepatitis B among nurses of the institute. To know the immunization status of Hepatitis B among Staff nurses working in the institute.

Material & Methods- Study Design – Cross Sectional type

Study Setting – Chhattisgarh Institute of Medical Sciences

Study Participants – Staff nurses

Study duration- July to December 2017.

Data collection- Pre-designed pretested questionnaire.

Data entry & Analysis- by Epi-info software & Microsoft office excel 2010.

Results-The average knowledge about hepatitis B of staff nurses-81.3%. While working in the hospital 64% nurses use PPE and 36% nurses don't take precautions. 68% nurses have very good knowledge, 28% nurses have good knowledge and 4% nurses have poor knowledge about Hepatitis B. 94% nurses are using hub cutter for disposal of needle. 20% nurses throw the used needle directly in the dustbin, 67% throw in the white container & 13% throw in any dustbin. 67% nurses are vaccinated, 17% are not vaccinated and 16% are not knowing their vaccination status.

Conclusion-staff nurses should be encouraged for getting vaccinated and to obtain knowledge regarding post exposure prophylaxis and use of preventive measures.

KEYWORDS : Staff Nurses, Knowledge, Attitude, Hepatitis B immunization, PPE

INTRODUCTION

Hepatitis B is an acute systemic infection with major pathology in liver caused by hepatitis B virus (HBV) and transmitted usually by the parenteral route. In approximately 5 to 15 percent of cases HBV infection fails to resolve and the affected individual becomes the persistent carrier of the virus. Persistent HBV infection may cause progressive liver disease including chronic active hepatitis and the hepatocellular carcinoma. Hepatitis B virus can form a dangerous alliance with the delta virus and produce a new form of virulent hepatitis which is considered to be a widespread threat for the world.¹

Among the health care personals, HBV, is transmitted by the skin prick with an infected, contaminated needles and syringes or through accidental inoculation of minute quantities of blood during the surgical and dental procedures. Physicians, dentists, nurses, laboratory staff, and dialysis center personnel are at high risk of acquiring infection.²

Globally, more than 2 billion are infected and about 6% of the world population is carrier for HBV. India has a point prevalence of 2.1% and carrier rate of 1.7%. Based on the prevalence of Hepatitis-B surface antigen (HBsAg), different regions of the world are classified as highly endemic zone where prevalence rate is $\geq 8\%$, which includes South-east Asia, China, Africa, Pacific Islands, Amazon and parts of Middle east, Intermediate endemic zone where prevalence rate is 2-7%, which includes South Asia, Eastern and Southern Europe, Russia and America (central and south) and low endemic zone where the prevalence rate is $< 2\%$, which includes United States, Western Europe and Australia. Though India falls under the intermediate endemic zone it has around one-fifth of world's population, which accounts for a large proportion of the worldwide Hepatitis-B infection burden. India harbors 10-15% of the entire pool of Hepatitis-B virus carriers of the world.³

HBV infection is a well-recognized occupational risk for Staff nurses. The risk of HBV infection is primarily related to the degree of contact with blood in the workplace and also to the hepatitis B-e antigen (HBeAg) status of the source person.

HBV infections that occur in staff nurses with no history of exposure might have resulted from direct or indirect blood or body fluid exposures that inoculated HBV into the mucosal surfaces or cutaneous scratches and other lesions. Staff nurses are at high risk for HBV infection because of particular exposure to mucous membrane and breached skin to blood.

Approximately 70% of staff nurses have been reported to have needle stick injuries with an average of two needle pricks a year. Nurses who sustain injuries from needles contaminated with blood containing HBV, the risk of developing clinical hepatitis is variable from 1.6% - 22% depending on the source. Paramedics have a higher risk of HBV transmission and receive HBV immunization less often than doctors. The practice of universal precautions such as safe needle disposal, wearing gloves and using goggles is suboptimal among staff nurses in India.

AIM-

Study of knowledge, attitude and immunization status among Staff nurses in Chhattisgarh Institute of Medical Sciences

OBJECTIVES-

- To assess the knowledge about Hepatitis B infection among Staff nurses.
- To assess the attitude regarding Hepatitis B among nurses of the institute.
- To know the immunization status of Hepatitis B among Staff nurses working in the institute.

MATERIALS & METHODS

- Study Design** – Cross Sectional type.
- Study Setting** – Chhattisgarh Institute of Medical Sciences
- Study Participants** – Staff nurses working at sardar vallabh bhai patel hospital of CIMS
- Inclusion Criteria** - Willing Staff nurses
- Exclusion Criteria** – Nurses not consenting were excluded
- Study duration-** July to December 2017
- Data collection-** Through pre-designed pretested structured questionnaire/ proforma.
- Data entry & Analysis** - by Epi-info software & Microsoft office excel worksheet 2010.

RESULTS

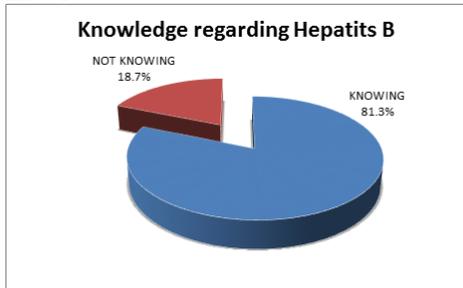
TABLE NO 1: DISTRIBUTION ACCORDING TO AGE

RANGE	NO	PERCENTAGE
21-30 yrs	48	48%
31- 40 yrs	47	47%

41- 50 yrs	4	4%
51-60 yrs	1	1%
TOTAL	100	100%

INFERENCE-According to the data there are 48% nurses in the range 21-30 yrs, 47% in the range 31-40 yrs, 4% in the 41-50 yrs and 1% in the 51-60 yrs.

Diagram No-1

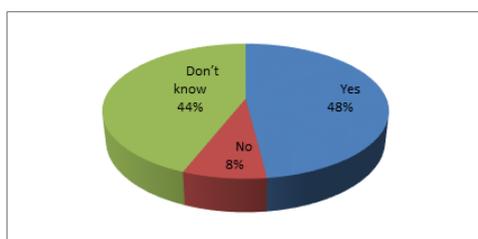


INFERENCE- According to the data the average knowledge about hepatitis B of staff nurses-81.3%

TABLE NO 2: DISTRIBUTION ACORDING TO THE ATTITUDE & PRACTICES

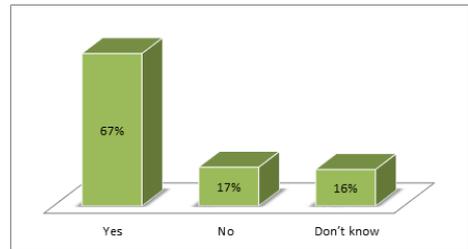
QUESTIONS	Yes		No	
	Number	Percentage	Number	Percentage
Do you think that nurses & other health care workers should be vaccinated?	100	100%	0	0%
2) Have you been vaccinated against Hepatitis B?	67	67%	33	33%
3) Have you ever been exposed to any blood transfusion?	20	20%	80	80%
4) Have you ever got in touch with any hepatitis B diagnosed patient?	96	96%	4	4%
5) Have you recently exposed to any needle prick?	20	20%	80	80%
6) Do you take precautions like wearing gloves, correct disposal of needle during your practice?	64	64%	36	36%
7) How do you dispose the used needle?	Correct Answers		Wrong Answers	
	Number	Percentage	Number	Percentage
	67	67%	33%	33%
8) Do you use the sterilised equipment during the minor procedures?	100	100%	0%	0%
9) Do you use hub cutter?	94	94%	6%	6%

Diagram No.-2 Post Exposure Prophylaxis Knowledge



INFERENCE-According to data only 48% nurses are knowing regarding PEP

Diagram No.-3- VACCINATION STATUS



INFERENCE-According to data 67% nurses are vaccinated, 17% are not vaccinated and 16% are not knowing their vaccination status

Table No 03: Taking Universal Precautions (PPE) In Practice.

Taking precautions	NUMBER	PERCENTAGE
a) yes	64	64%
b) no	36	36%
TOTAL	100	100%

INFERENCE-According to data only 64% nurses using personal protective measures and 36% nurses don't take precautions.

Table No 04:-Grading Of Knowledge Among Nurses.

GRADING	Range Of Correct Answer	Number	Percentage
a) very good knowledge	10-13	68	68%
b) good knowledge	6-9	28	28%
c) poor knowledge	<6	4	4%
TOTAL		100	100%

INFERENCE- According to data 68% nurses have very good knowledge, 28% nurses have good knowledge and 4% nurses have poor knowledge about Hepatitis B.

DISCUSSION

In present study, a high majority of the staff nurses were aware regarding HBV infection and its immunization. 81.3% of them were aware regarding the hepatitis infection & correct route of transmission of Hepatitis virus infection. This finding is similar to other study conducted by Sowmya Kasetty et al⁶ 82.15%, had good knowledge about its transmission..

Universal precautions are designed to prevent infection from inoculation; contact with mucous membranes such as mouth or eye, or through skin damages such as cuts. 64% of subjects in the present study followed universal precautions while dealing with Hepatitis B patients. On the contrary only 20% of subjects reported following universal precautions in a study conducted in some other part of India among BSc nursing students.⁷

The results of the present study showed that 67% of the subjects were aware regarding the correct disposal of BMW. Similar finding in other study reports where more than 50% of the subjects had good knowledge regarding BMW disposal⁸. Another study conducted in a tertiary hospital in India reported that 85% of nurses had knowledge regarding correct BMW management⁹. In Present study 67% nurses are vaccinated, 17% are not vaccinated and 16% are not knowing their vaccination status, In comparison to our study SumitKumar, Rehana Begum et al¹⁰ in their study found 46.2% HCW fully vaccinated, 12% partially vaccinated and 41% not vaccinated. Shagufta Hussain¹¹ et al in their study had complete immunization rate of 57.6%, partial 18.5% and nonvaccinated 24%. Subhash Chandra et al¹² had overall proportions of complete, incomplete and unvaccinated respondents with hepatitis B vaccine as 48.5%, 21.8% and 29.7% respectively.

CONCLUSION

-The level of knowledge regarding Hepatitis B infection among study participants was satisfactory. But they have low level of knowledge regarding preventive measures after being in contact with the infected person & only 64% nurses using personal protective measures (universal precautions) in practice.

The attitude of staff nurses towards the safety measures and vaccination was healthy, But many of the staff nurses were not vaccinated and have poor knowledge regarding post exposure prophylaxis.

So, staff nurses should be encouraged for getting vaccinated and to obtain knowledge regarding post exposure prophylaxis and prevention.

RECOMMENDATIONS

Repeated reinforcement in the form of lectures and health education should be undertaken in order to maintain the knowledge regarding post exposure prophylaxis against Hepatitis B and practice of safe needle disposal in the right container as stated under bio medical waste management at the optimum level. Strict enforcement of checking for vaccination status before coming into practice as nurse. Training regarding personal protective measures and post exposure prophylaxis before posting into the hospital.

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