

Original Article

Knowledge, Attitude and Practice concerning Hepatitis B infection among the health care personnel in selected Primary Health Care Centres in Lucknow

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DOI: 10.5455/jrmds.20164110

ABSTRACT

Background: Hepatitis B is a major global health problem and one of the most serious type of viral hepatitis, but it can be prevented with strategies like safe and effective vaccination, increasing awareness and by adhering to universal precautions.

Objective: To assess the knowledge, attitude and practice concerning Hepatitis B infection among the health care personnel.

Materials and methods: Cross-Sectional study was conducted among health care personnel working at the Primary Health Centres in Lucknow. A total of 89 health care personnel comprising of medical officers, staff nurses, laboratory technicians, pharmacists including class IV workers present on the day of data collection were included in the study and interviewed using pretested questionnaire. Descriptive summary using frequencies, proportions and percentages were used to present study results.

Result: Majority (93.4%) of the medical officers were aware about type of hepatitis in comparison to staff nurses, paramedical staff and class IV workers (20.0%, 21.8% and 4.5% respectively). Knowledge about symptoms of hepatitis B was found minimal (9.1%) among class IV workers and paramedical staff (18.7%) as compared to doctors (80.0%) and staff nurse (35.0%). Only 13.6% of class IV worker had concern to report each and every case of needle stick injury. Practice to strictly follow of universal precautions and biomedical waste management guidelines was found to be least (9.1% and 18.1% respectively) among class IV workers.

Conclusion: The study revealed sub-optimal KAP (Knowledge, attitude and practices) in concern to several aspects of Hepatitis B infection among primary healthcare personnel.

Key words: Hepatitis B, Knowledge, Attitude, Practices, Healthcare personnel

INTRODUCTION

Hepatitis B is an acute systemic infection with major pathology in the liver, caused by Hepatitis B virus (HBV) and transmitted usually by the parenteral route. Although an effective vaccine is available, but still it continues to be a major public health concern. About two billion individuals have been infected with HBV at some point worldwide in time in their lifetimes and 360 to 400 million people (5% of the world's population) are chronic carriers. HBV and its consequences are estimated to cause 600,000 deaths each year, a tenth of deaths worldwide [1]. India has point prevalence of 2.1% and carrier rate of 1.7%. Some studies have shown higher carrier state ranging from 11% in healthcare worker to 5% in general population [2]. About 66,000 hepatitis B viral infections are reported per year due

to needle stick injuries[3]. In India, the carrier rate of HBsAg in hospital staff has been found to be higher (10.87 per cent) than in voluntary blood donors (6 per cent) and in the general population (5 per cent) [4]. The factors that contribute to the rising worldwide prevalence of HBV are of particular relevance in developing countries: lack of awareness, poverty, illiteracy and reticence to change [5]. Health care personnel comprising not only medical officers but also staff nurses, laboratory technicians, pharmacists and class IV workers are considered at a high risk of exposure to blood born viral diseases (i.e. HBV and Human Immunodeficiency Virus) via contact with blood and other body fluids in the course of their work [5, 6]. Therefore the present study aimed to assess the knowledge attitude and practice concerning Hepatitis B infection among the health care

personnel in selected Primary Health Care Centres in Lucknow.

MATERIALS AND METHODS

Study Setting: The study was conducted at Primary health care centres of Lucknow.

Study Design: Hospital-based cross-sectional study.

Study population: Health care personnel (designated as medical officers, staff nurses, health workers, laboratory technicians, pharmacists and class IV workers)

Sampling

The present study was conducted in 13 randomly selected primary health centres in Lucknow from March 2014 to May 2014. A total 89 health care personnel working at primary health centres present during the visit of investigator to centre and willing to participate were included in the study.

Data management: A pre-designed and pretested semi-structured questionnaire was used to collect data through face-to-face interviews. The information collected on the study schedule was transferred on the pre- designed classified tables and analysed according to the aims and objectives.

RESULT

Table 1: Demographic characteristics of the study respondents

Variable	Number (n=89)	Percentage (%)
Age (in years)		
Up to 25 years	4	4.5
26-35	19	21.3
Above 35	66	74.1
Occupation		
Medical officers	15	16.8
Staff nurses	20	22.4
Paramedical staff	32	35.9
Class IV worker	22	24.7
Years of experience		
<3	19	10.1
3-10	13	14.6
10-15	39	43.8
>16	28	31.5

Socio-demographic characteristics of the study participants

A total 89 health care personnel were included in the study. The majority was composed of paramedical staff (lab technicians and pharmacist) representing 35.9% of the study population. Four

(4.5%) participants were up to 25 years of age, 19(21.3%) were between 26-35 years and majority (74.1%) was above 35 years. As per working experience in the health care system, majority (43.8%) had worked for 10-15 years [Table 1].

Table 2: Knowledge of health care personnel about Hepatitis B infection

Knowledge regarding Hepatitis B infection	Medical officers n=15 (%)	Staff nurses n=20 (%)	Paramedical staff n=32 (%)	Class IV worker n=22 (%)
Types of Hepatitis	14 (93.4)	4 (20.0)	7 (21.8)	1 (4.5)
Modes of transmission				
Needle Stick Injury	15 (100)	10 (50.0)	12 (37.5)	2 (9.1)
Vertical Transmission	14 (93.4)	9 (45.0)	10 (31.2)	3 (13.6)
Infected blood transfusion	15 (100)	17 (85.0)	28 (87.5)	12 (54.5)
Unsterilized instruments	15 (100)	12 (60.0)	17 (53.1)	9 (40.9)
Sex	13 (86.7)	9 (45.0)	4 (12.5)	10 (45.4)
Symptoms of Hepatitis	12 (80.0)	7 (35.0)	6 (18.7)	2 (9.1)
Prevention				
Whether HBV is preventable	15 (100)	18 (90.0)	20 (62.5)	19 (86.3)
Hepatitis B vaccine is available	15 (100)	20 (100)	27 (84.3)	18 (81.8)
Post exposure prophylaxis available	14 (93.4)	12 (60.0)	18 (56.2)	3 (13.6)
Knowledge of vaccination schedule	10 (66.6)	18 (90.0)	12 (37.5)	0 (0)
Universal precautions	13 (86.6)	15 (75.0)	17 (53.1)	4 (18.2)

Knowledge about Hepatitis B infection

Knowledge assessment was based on question with respect to types, transmission mode and prevention of Hepatitis B infection. Almost all (93.4%) of the medical officers were aware about type of hepatitis, while knowledge was comparatively low (20.0%, 21.8% and 4.5% respectively) among staff nurses, paramedical staff and class IV workers. Majority of the doctors had quite good knowledge about transmission of

Hepatitis B, while the awareness about the same was poorest among class IV workers. Knowledge about needle stick injury as a risk of Hepatitis B infection was found 50%, 37.5% and 9.1% among staff nurses, paramedical staff and class IV worker respectively. With respect to symptoms of Hepatitis B, knowledge regarding same was found minimal (9.1%) among class IV workers and paramedical staff (18.7%) as compared to doctors (80.0%) and staff nurse (35.0%). Almost all the medical officers were aware about Hepatitis B preventive measures. Majority of the health care personnel in each category were aware about the availability of Hepatitis B vaccine. A major concern is regarding knowledge about post exposure prophylaxis which was found suboptimal. Even none of the class IV worker had heard about post exposure prophylaxis. Knowledge about universal precaution was found in more than 50% among all health care personnel other than class IV workers [Table 2].

Table 3: Attitude of health care personnel about Hepatitis B infection

Attitude towards Hepatitis B infection	Medical officers n=15 (%)	Staff nurses n=20 (%)	Paramedical staff n=32 (%)	Class IV worker n=22 (%)
HBV vaccination should be compulsory	15 (100)	20 (100)	22 (68.7)	7 (31.8)
Reporting each and every case of needle stick injury	15 (100)	16 (80.0)	17 (53.1)	3 (13.6)
Universal precautions should be strictly followed by all healthcare workers	13 (86.7)	10 (50.0)	16 (50.0)	2 (9.1)
Proper biomedical waste management practices is necessary	15 (100.0)	20 (100)	31 (96.8)	19 (86.4)

Attitude towards Hepatitis B infection

All the medical officers and staff nurses believed that vaccination should be made compulsory, while the attitude regarding Hepatitis B vaccination was quite unsatisfactory among paramedical staff and class IV workers (68.7% and 31.8% respectively). Only 13.6% of class IV worker had concern to report each and every case of needle stick injury. Out of 89 healthcare personnel 13 medical officers,

10 staff nurses, 16 paramedical staff and only 2 class IV worker believed that universal precautions should be strictly followed by all those involved in healthcare [Table 3].

Table 4: Practices of health care personnel for prevention of Hepatitis B infection

Practices concerning prevention from Hepatitis B infection	Medical officers n=15 (%)	Staff nurses n=20 (%)	Paramedical staff n=32 (%)	Class IV worker n=22 (%)
Screened for Hepatitis B in last three years	12 (80.0)	9 (45.0)	4 (12.5)	1 (4.5)
Hepatitis B vaccine taken	14 (93.3)	10 (50.0)	7 (21.8)	2 (9.1)
Wear gloves and mask while handling any sort of item soiled blood/human secretion	7 (46.7)	12 (60.0)	14 (43.7)	7 (31.8)
Wear apron during work	5 (33.3)	17 (85.0)	7 (21.8)	0 (0)
Avoid recapping of needle after use	12 (80.0)	12 (60.0)	15 (46.8)	2 (9.1)
Discarding of used needles by hub cutter immediately	12 (80.0)	14 (70.0)	4 (12.5)	1 (4.5)
Strictly follow universal precaution	10 (66.7)	12 (60.0)	15 (46.8)	2 (9.1)
Strictly follow biomedical waste management guidelines	12 (80.0)	13 (65.0)	17 (53.1)	4 (18.1)

Practices concerning prevention of Hepatitis B infection

Only 1 out of 22 class IV worker had been screened for Hepatitis B in last three years. Proportion of staff nurses, paramedical staff and class IV workers immunised for Hepatitis B was reported quite less (50%, 21.8% and 9.1% respectively) as compared to medical officers. The practice regarding strictly following of universal precautions and biomedical waste management guidelines was found to be least (9.1% and 18.1% respectively) among class IV workers. Avoidance of recapping of needles used and discarding immediately with hub cutter was

found quite lower among paramedical staff and nearly absent in class IV workers [Table 4].

DISCUSSION

The findings of the present study revealed some interesting facts regarding KAP(knowledge attitude and practices) of healthcare personnel concerning some important aspects of hepatitis B infection. Results showed that healthcare personnel especially class IV workers had quite poor KAP towards hepatitis B infection which is quite a matter of concern. The findings regarding knowledge level reported were quite similar to that reported in earlier studies both globally [5, 7, 8] as well as in Indian context [9, 10, 11]. Level of knowledge about type of hepatitis B and the routes of transmission of the infection varied among the different categories of healthcare personnel which might be due to difference in their level and type of education. Other than doctors, majority of other healthcare personnel were not screened for Hepatitis B in the last three years and many of them even didn't know about their serological status. This matter must be kept insight as these healthcare personnel are more or less dealing with the patient through various interventions in everyday life and may serve as a source of infection. Of course majority had knowledge about Hepatitis B vaccine, but it was still a matter of concern that all were not immunised for the same, especially class IV worker.

The reason for not being vaccinated against hepatitis B infection; most of the staff nurses and paramedical staff stated that they were too careful to acquire the infection while class IV worker didn't felt the same as need. Setia et al opined that this gap in knowledge of risk perception calls for concern among all health workers because of their high frequency of exposure to blood and other body fluids coupled with the high contagiousness of Hepatitis B [11]. The knowledge and practice of universal precautions was also reported quite inadequate. This is in line with many studies globally where, regardless of indications that non-adherence to barrier precautions raises the exposure risk of blood and body fluids, either poor level of compliance or sub optimal adherence has been reported widely [5,12,13]. Study revealed that although majority of health care personnel believed that proper biomedical waste management practices is necessary for prevention of Hepatitis B, but in contrast to that the practice of the same was found comparatively suboptimal. In contradiction to a study conducted by Koria et al, practice of wearing gloves, mask and apron was quite less while dealing patients or handling any specimen containing blood or body fluids [9]. Improper

implementation and inadequate routine monitoring of such practices as well casual work culture of healthcare personnel might be the reason for such practices in actual set up regardless of the knowledge level.

However the study had certain limitation; as it cannot be generalized due to the small sample size as well as limited area as it was conducted only at thirteen randomly selected PHCs. Apart from that only those health care workers who were present at respective centres during the time of visit of the investigator were included in study.

CONCLUSION

This study highlights the dissimilarities in knowledge, attitude as well as practices amongst different categories of healthcare personnel regarding Hepatitis B infection. The most devastating situation was of class IV workers who were at the lowest strata in terms of both knowledge and practices and therefore was at highest risk of Hepatitis B infection. Study also revealed the inadequate, suboptimal and non-satisfactory behaviour for universal precaution as well as biomedical waste management practices. Therefore it was concluded that provision of satisfactory knowledge through orientation and sensitization programme as well as educational campaign will help to create awareness regarding HBV infection can only bring about a positive attitude, thereby leading to good practices. Apart from that the periodic screening and proper immunization of all healthcare personnel should be made mandatory.

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Date of Submission: 06/01/2016
Date of Acceptance: 24/02/2016

How to cite this article: Shukla M, Tyagi S, Gupta NK. Knowledge, Attitude and Practice concerning Hepatitis B infection among the health care personnel in selected Primary Health Care Centres in Lucknow. *J Res Med Den Sci* 2016;4(1):45-9.

Source of Support: None
Conflict of Interest: None declared