

Cross sectional study on awareness and risk perception about hepatitis b infection among auxillary health care personnel in an urban area of Andhra Pradesh

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Abstract

Introduction: Hepatitis B virus infection is the tenth leading cause of death worldwide. The most common mode of transmission in healthcare settings is through contaminated blood and blood products. There is increased risk of HBV infection to health care personnel like auxillary healthcare personnel as chances of exposure during invasive diagnostic, therapeutic procedures.

Objective to assess the awareness and risk perception about Hepatitis B virus infection among AHCPs.

Materials and Methods: A hospital based cross sectional study was conducted in G Pulla Reddy Dental College and Hospital Kurnool Andhra Pradesh. A total of 190 AHCP from various cadres like lab technicians, laundry personnel, housekeeping staff and hygienists were contacted for the study and among them 160 participated in the study. A standard prevalidated multiple choice questionnaire was used in our study to collect the data.

Results: The response rate for awareness about HBV infection was around 92.03% and for the risk perception was about 68.06%. Regarding the information about awareness on HBV infection 96.8% of the study subjects responded were aware that blood and its products are the common modes of HBV transmission. 74.2% of them knew that HBV infection results in liver cancer and 94.2% responded that contaminated syringes and needles will also transmit HBV infection.

Conclusion: clear management policies with regard to advocacy on awareness, protection and precautions in the form screening and vaccination programmes will ensure safety of the health care personnel. Pre-placement and periodic medical examination and training programmes should be conducted to maintain high standards in health care.

Keywords: Dental, Hepatitis B Infection, Awareness, Perception.

Introduction

Hepatitis B virus infection (HBI) is the tenth leading cause of death and reports shows more than 2 billion people around the world have evidences of past or recent infection Hepatitis B Virus (HBV) and more the 350 million are suffering from chronic carrier status.¹⁻³ In India it estimated around one lakh people die because of HBI.

Hepatitis B Virus belongs to the Hepadnaviridae family. The virus has mainly two parts, in its inner core contains hepatitis B core antigen, hepatitis B e antigen, DNA polymerase enzyme and a double stranded DNA nucleotide molecule. While the outer surface which is an lipoprotein layer contains the HBsAg surface antigen.⁵ The common modes of transmission of HBV is through mucosal exposure to infective body fluids such blood, pleural fluid, salive etc., Intravenous drug injections, unprotected sexual contact and also through nosocomial infections.⁶

The most common mode of transmission in healthcare settings is through contaminated blood and blood products.⁷ There is increased risk of HBV infection to health care personnel like auxillary healthcare personnel (AHCP) as chances of exposure during invasive diagnostic, therapeutic procedures. Activities like biomedical waste handling and during invasive procedures these AHCP are at risk of coming in contact with blood and its products.⁸ Therefore it is imperative that they must be aware of Hepatitis B

infection and its effective methods of prevention. Hence this study was conducted to assess the awareness and risk perception about HBV infection among AHCP.

Materials and Methods

A hospital based cross sectional study was conducted in G Pulla Reddy Dental College and Hospital Kurnool Andhra Pradesh. The study period was May 2017 to September 2017. A total of 190 AHCP from various cadres like lab technicians, laundry personnel, housekeeping staff and hygienists were contacted for the study and among them 160 agreed to participate in the study. Informed consent was taken from subjects after explaining about the purpose of the study. Approval from the institutional ethical committee was obtained before conducting the study. A standard pre validated multiple choice questionnaire designed by Patil S was used in our study. The collected data was analyzed by using SPSS version 22.

Results

A total of 160 ACHWs participated in the study among them majority were housekeeping staff (70.6%), whereas lab technicians constituted 18.1% followed by laundry personnel (8.7%) and hygienists about 2.5% (Fig. 1).

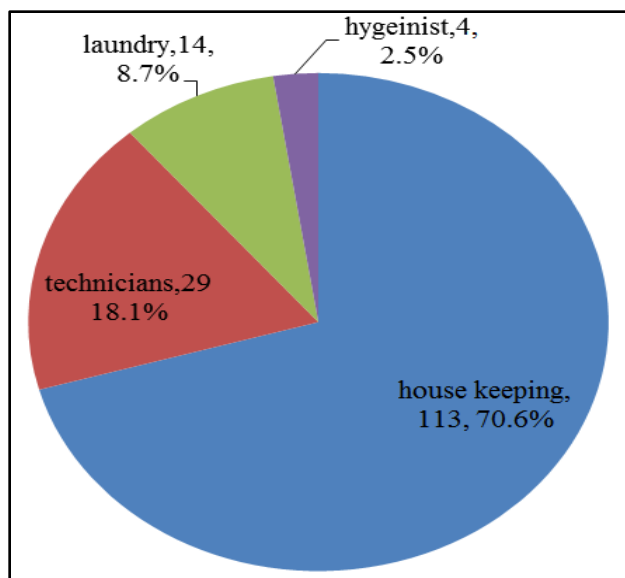


Fig. 1: Distribution of study participants according to type of job

The response rate for awareness about HBV infection was around 92.03% and for the risk perception was about 68.06% (Fig. 2) it was heartening to know that 85.2% of AHCP were vaccinated against Hepatitis B infection.

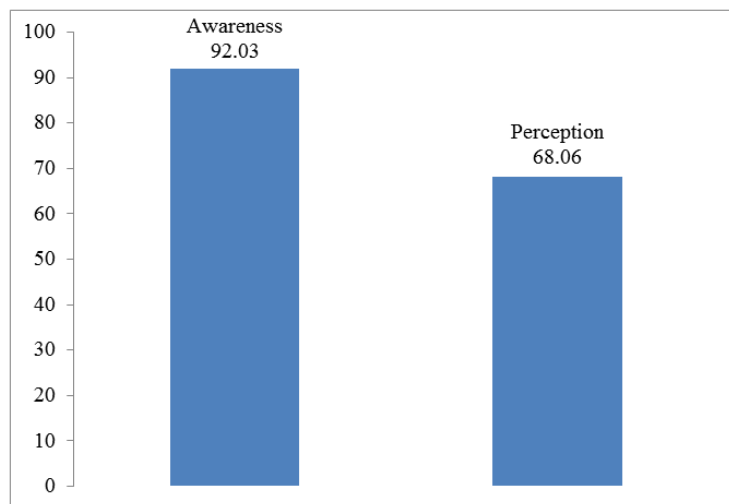


Fig. 2: Awareness and risk perception about HBV infection

Regarding the information about awareness on HBV infection 96.8% of the study subjects responded were aware that blood and its products are the main modes of HBV transmission. 74.2% of them knew that

HBV infection results in liver cancer and 94.2% responded that contaminated syringes and needles will also transmit HBV infection (Table 1).

Table 1: Awareness of hepatitis B infection among auxiliary healthcare workers

S.No.	Items	Response	Percentage
1.	Ever heard of hepatitis B infection?	Yes	93.2
2.	What is hepatitis B	Virus	91.9
3.	Hepatitis B infection spread	Through blood	96.8
4.	Risk factors for hepatitis B infection	Sharing used needles and syringes	94.2
5.	Can hepatitis B infection spread through blood and blood products	Yes	97.3

6.	Can hepatitis B infection be transmitted from a mother to her infant	Yes	91.0
7.	Is hepatitis B infection more easily spread than acquired immunodeficiency syndrome	Yes	88.1
8.	Can hepatitis B infection cause liver cancer	Yes	74.2
9.	How many doses of hepatitis B vaccine are required for complete protection	3	90.8
10.	Can newborns be vaccinated against hepatitis B infection	Yes	74.2

Table 2: perception of risk of hepatitis B infection in auxiliary healthcare workers

S.No.	Variable	Response	Frequency (%)
1.	Can your profession put you at risk of hepatitis B infection	Yes	92.8
2.	Do you wear gloves while handling medical wastes, biological samples, and doing procedures on patients		
3.	Do you use a used needle breaking instrument to dispose used needles and syringes		
4.	If you get pricked accidentally by a used needle, what will you do	Go to a physician and get screened and vaccinated	44.1
5.	In which color bags are blood soaked cotton, dressings, etc., discarded	Yellow	39.2
6.	In which color bags are sharps/needles/syringes/scalpels discarded	White/Translucent	53.4
7.	Can an infected health worker transmit hepatitis B infection to a patient	Yes	82.9
8.	Can hepatitis B infection be prevented by vaccination	Yes	97.8
9.	Are you vaccinated against hepatitis B virus	Yes	95.4

With respect to risk perception about Hepatitis B virus infection surprisingly only 44.1% knew about the correct course of action whenever there is needle stick injury. 39.2% knew the yellow colour coded bag is used disposal discarding dressings and blood soaked cotton. Just over half of them (53.4%) responded correctly that the type of bag used for disposal of waste sharps and needles and 81.3% of them knew about sharp container for disposing lancets and needles (Table 2).

Discussion

Health care personnel particularly auxiliary staff are at risk of coming in contact with contaminated blood and body fluids, contaminated sharps. In our study it was that awareness about HBV infection was adequate among the study participants however perception about risk of HBV infection and transmission was moderate. Sparse knowledge about biomedical waste management among subjects was a matter of concern. Biomedical waste which is not handled and disposed in a proper way can result in serious implications on the health of AHCP, hence it is mandatory for having proper biomedical waste disposal thereby they can be protected against infections.

Strict adherence to guidelines on biomedical waste management, vaccination schedule and post exposure prophylaxis of needle stick injury⁹⁻¹¹ will definitely minimize the chances acquiring the HBV infection.

In the present study it was reported that 95.4% were vaccinated against HBV and this finding was similar to study done by Patil S¹ (2013) wherein it was 96.2%. However Singhal et al⁸ (2011) reported only 58.3% of health care personnel vaccinated against HBV.

Study by Muhammad S Memon et al¹² (2007) found that 64.6% of the study participants were vaccinated against HBV infection and 66.2% of them received more than 3 doses of the vaccine and the frequency vaccination was low (18.9%) among AHCP this might be because of lack of awareness about the vaccination.

Our study reported adequate knowledge (92.03%) about HBV infection among AHCP and moderate (68.06%) risk perception. This in contrast to study findings by Habib et al¹³ (2011) which reported that there was an inadequate knowledge and behavior and attitude about clinical practices was compromised.

In our study 95.4% of the auxiliary health care personnel were immunized for HBV which was a very

good figure in terms of protection is concerned. Dannetun et al¹⁴ (2006) found that only 40% of the health care personnel were fully immunized against HBV and 95% of the unvaccinated were from the auxiliary health personnel. This might be due to lack of acceptance among the personnel and poor management policy by the employer.

Conclusion

It is prevention is always better than treatment and rehabilitation. This holds good for preventing HBV infection too. From our study it can be concluded that a clear management policies with regard to advocacy on awareness, protection and precautions in the form screening and vaccination programmes will ensure safety of the health care personnel preplacement and periodic medical examination and training programmes should be conducted to maintain high standards in health care.

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