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Research Article

Assessment of knowledge attitude and practice towards hepatitis B among health care workers in a tertiary care hospital

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ABSTRACT

Background: Hepatitis B is caused by infection with hepatitis B virus and is a major global health burden. In India, the prevalence of Hepatitis B in general population is 2-10%, which place India in an intermediate endemic zone and second largest global pool of chronic hepatitis B infection. Among health care workers Hepatitis B prevalence is two to four folds higher than that of the general population. Transmission of hepatitis B occurs from infected person through blood transfusion; needle pricks unprotected sexual intercourse, sharing of eating utensils and other barber shop and beauty salon equipment. To curb HBV infection prevention programs must be implemented and the complete vaccination schedule must be followed. The objective of the study was to assess the Knowledge attitude and practice towards Hepatitis B among health care workers in a tertiary care hospital.

Methods: This cross sectional prospective study was done in the Department of Obstetrics and Gynecology GMC Srinagar. Information about the socio-demographic characteristics, knowledge towards transmission and prevention method of hepatitis B was taken from 150 health care workers including medical and paramedical staff of the hospital.

Results: This cross sectional prospective study was conducted in the Department of Obstetrics and Gynecology Govt. Medical College Srinagar from January to June 2015. 150 health care professionals were taken for the study. Knowledge regarding disease and transmission was fairly good. Regarding vaccination status 42.02% of medical and 29.60% of paramedical staff was fully vaccinated, the most common reason for non compliance being ignorance of importance of vaccination. Awareness of patients' vaccination status was also low.

Conclusions: Due to low vaccine-compliance, Health care workers (HCW) continue to be at the risk of occupational HBV infection. Regular Health education highlighting occupational risk of HBV, accessibility of vaccine, and mandatory vaccination of HCW is recommended to prevent Hepatitis B infection.

Keywords: Hepatitis B virus, Health care workers, Transmission, Vaccination

INTRODUCTION

Hepatitis B caused by infection with hepatitis B virus is a major global health burden. This infection affects the liver and is the most common cause of chronic hepatitis, liver cirrhosis and hepato-cellular carcinoma.¹ Hepatitis B is a public health problem affecting about 10% of the world population.² More than two billion of the

population worldwide have evidence of recent or past HBV infection and there are more than 350 million chronic carriers of this infection.^{1,3} In India the prevalence of hepatitis B infection is between 2-10% in the studied population.⁴ The number of HBsAg carriers in India has been estimated to be about 40 million. Estimates indicate that annually over 100,000 Indians die because of disease related with HBV infection.⁵

Hepatitis B is transmitted from one infected individual to another by blood to blood contact, mother to child, unprotected sexual intercourse, sharing barber shop and beauty salon equipment.⁶

The practice of modern medicine have contributed a lot in rising rate and spreading of blood born diseases like Human immune deficiency virus and HBV due to lapse in the sterilization technique and improper hospital waste management as 10 to 20% health care waste is regarded hazardous⁷. Among the health care personnel's HBV is transmitted by prick of contaminated needles and syringes or through accidental inoculation of the minute quantities of blood during surgical and dental procedures. Knowledge regarding the Hepatitis B virus and safety precautions is needed to minimize the acquired infections among health workers. They should have the complete knowledge of Hepatitis B infections, importance of vaccinations and practice simple hygienic measures apart from specific protective measures.

A vaccine against hepatitis B has been available since 1982 with the efficacy 85-90% in preventing infection and the development of chronic disease and liver cancer due to hepatitis B.

METHODS

This cross sectional prospective study was conducted in the Department of Obstetrics and Gynecology Govt. Medical College Srinagar from January to June 2015. A sample of 150 health care professional including medical and paramedical staff working in the hospital was taken. A structured questionnaire was used to collect information about the socio-demographic characteristics, knowledge towards transmission and prevention method of hepatitis B virus and practice towards prevention HBV. Data was entered and analyzed in SPSS version - 16 and was presented in the form of simple graphs.

RESULTS

A total of 150 health care professionals were taken for the study. Among 150 cases 69 were medical professionals and 81 were Para-Medical workers. The mean age of medical professionals was 27.8 yrs with 9.08 yrs experience in profession. The mean age of paramedical staff was 36.6yrs with 14.7 yrs of experience.

Knowledge regarding disease

100% of medical professionals had knowledge of hepatitis B disease whereas 98.7% paramedical professionals had the same knowledge.

Knowledge regarding transmission

100% of medical professionals had correct knowledge regarding all modes of transmission. However knowledge regarding transmission was less in paramedical

professionals. Knowledge regarding sexual route was 83%, needles and syringes 72%, blood transfusion 95% and vertical transmission 70%.

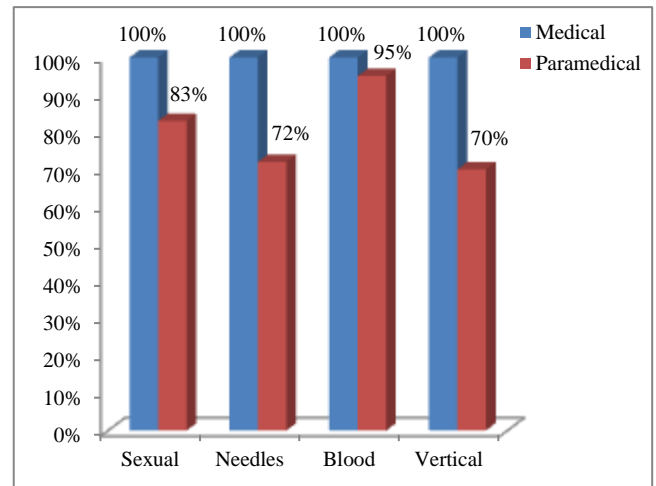


Figure 1: Knowledge regarding routes of transmission.

Source of infection

99% of medical professionals and 98% of paramedical professionals were at risk of getting disease. In medical staff 98% were at risk of needle pricks, 86% to blood and body fluids. In paramedical staff 78% were at risk of infection with blood and body fluids, 28% at risk of needle pricks.

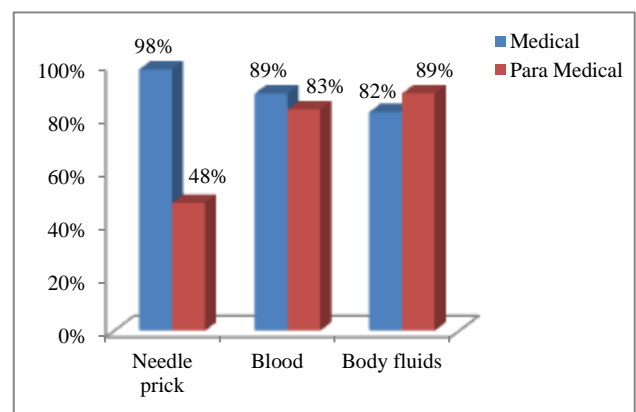


Figure 2: Sources of infection.

Vaccination status

55(79.7%) of medical staff was vaccinated. Among them 29(42.02%) had taken 3 doses whereas 26(47%) had taken only 2 doses. Among vaccinated 88% had taken it within past 5 yrs, 8% within 5-10yrs and 4% before 10yrs.

48(59.25%) of paramedical staff was vaccinated. Among them 24(24%) had taken 3 doses, 18(18%) had taken 2

doses whereas 6 (6%) had taken only 1 dose. Among vaccinated 79% had taken it within past 5 yrs, 12% within 5-10 yrs and 9% before 10yrs.

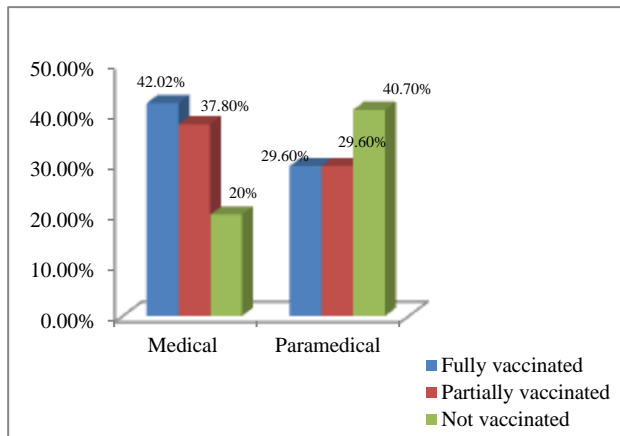


Figure 3: Vaccination status.

Reason for not taking vaccination

14(20%) medical professionals had not taken vaccination. When asked about reason 84% had ignored vaccination in spite of awareness whereas 16% had non availability of vaccine.

33(40.70%) of paramedical staff were not vaccinated. Reason for non-compliance being ignorance (72%), non availability of vaccine (12%) and lack of awareness (16%).

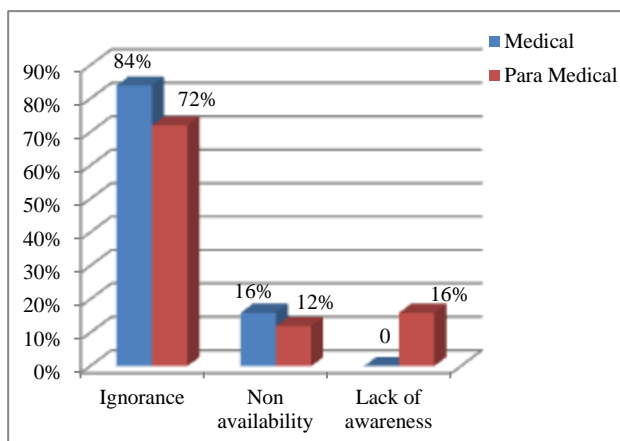


Figure 4: Reason for not getting vaccinated.

Knowledge about patient's Hepatitis B Status

Only 25% medical staff was aware, 71% is occasionally aware and 4% not aware about patient's hepatitis B status.

In Para Medical staff 20% was aware, 66% is occasionally aware, whereas 14% not aware about patient's hepatitis B status.

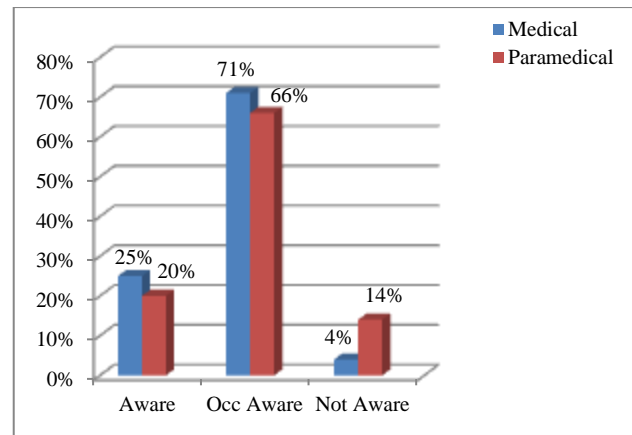


Figure 5: Awareness of patients' hepatitis B status.

Knowledge about own Hepatitis B status

56.52% Medical professionals knew their own hepatitis B status whereas only 32.09% Para Medical professionals had checked their hepatitis B status.

DISCUSSION

The current study was sought to evaluate knowledge and practice towards Hepatitis B among medical and paramedical staff working in the Department of obstetrics and Gynaecology GMC Srinagar. The Knowledge regarding epidemiology of Hepatitis B was fairly good in medical staff compared to paramedical staff (100% v/s 98.7%). Knowledge about HBV transmission is essential for health care workers so that they can take proper protection during their clinical practice as HBV is 50 times easier to transmit than HIV.⁹ The study revealed that there was good knowledge regarding transmission in medical staff whereas 83% of paramedical staff had knowledge regarding sexual route, 72% Needles pricks, 75% blood and 70% vertical transmission. Avjot Mighlani¹⁰ in his study found 100% awareness in doctors regarding transmission of disease whereas 82% nurses and 80% lab technicians had knowledge regarding Hepatitis B transmission.

In the present study medical staff had better knowledge regarding prevention of HBV as compared to Para medical staff. Regarding post exposure prophylaxis only 63% of medical staff and 43% Para medical staff were aware which calls for well structured health education programs. Sowmya Kasetty et al¹¹ 82.15%, 95.36%, 58.22% and 93% had good knowledge about hepatitis infection and its transmission, vaccine, attitude towards HBV patients and post exposure prophylaxis respectively.

In the present study 42% of medical staff was fully vaccinated, 37% partially vaccinated and 20% not vaccinated at all. In paramedical staff only 29% were fully vaccinated, 29% partially vaccinated and 40% not vaccinated at all. The various reasons for not getting

vaccinated were ignorance (84%/72%) followed by non availability of vaccine and lack of awareness. Sumit Kumar, Rehana Begum et al¹² in their study found 46.2% HCW fully vaccinated, 12% partially vaccinated and 41% not vaccinated. Shagufta Hussain¹³ et al in their study had complete immunization rate of 57.6%, partial 18.5% and non vaccinated 24%. Subhash Chandra et al¹⁴ had overall proportions of complete, incomplete and unvaccinated respondents with hepatitis B vaccine as 48.5%, 21.8% and 29.7% respectively.

Regarding knowledge of patient's Hepatitis B status only 25% of medical and 20% of paramedical staff are aware. 71% of medical staff and 66% of Para medical staff are occasionally aware about patients' status. This lack of awareness was due to high rush of unbooked and uninvestigated patients and lack of immediate testing.

56.52% of medical staff had done testing for Hepatitis B status whereas 32.03% of paramedical staff had done their own testing. Shagufta Hussain et al¹³ in their study found that 93.7% knew about their own Hepatitis B status while 6.3 % had never got themselves tested for hepatitis B.

CONCLUSIONS

Our study highlights low and delayed vaccine compliance in health care workers leading to continued occupational risk of Hepatitis B Virus (HBV). Attitude, knowledge of HBV infection and accessibility of HBV vaccine were important factors in low and delayed vaccination in health care workers. The study recommends regular health education programmes of HCWs on occupational risk of HBV and mandatory vaccination of HCW in prevention of HBV infection. Medical colleges should have occupational health departments that take responsibility of HBV testing, vaccination, response monitoring and providing post exposure prophylaxis. It is also recommended to make vaccines available and accessible.

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Conflict of interest: None declared

Ethical approval: The study was approved by the Institutional Ethics Committee

REFERENCES

- World Health Organization (2011) Hepatitis B. Fact sheet no:204. Available:<http://www.who.int/mediacentre/factsheets/fs204/en> Accessed 2015 July 06.
- Park JE, Park K. Text Book of Preventive and Social Medicine, 19th Edition. M.S. Banarsidas Bhanot. 2007;267.
- Samuel SO, Aderibigbe SA, Salami TA, Babatunde OA. Health workers' knowledge, attitude and behavior towards hepatitis B infection in Southern Nigeria. *Int J Med Sci.* 2009;1:418-24.
- Tandon BN, Acharaya SK, Tandon A. Epidemiology of Hepatitis B virus infection in India. *Gut.* 1996;38(2):56-9.
- Taneja N, Biswal M. Rapid Assessment of Hepatitis B Vaccine Introduction in India. Proposal for INS support: India-GAVI Alliance. 2004. Aug 1st-6th, Last accessed on 2013 Sep 10. www.gavialliance.org/country/india/documents.
- Yayehyirad K, Asfaw D, Hailemariam K, Mengistu A, Binyam A. Of Institutions and Persons. *Ethio. J. Health Dev.* 2009;23:173-223.
- Taneja N, Biswal M. Safe disposal of infectious waste.. *Indian perspective Journal of Hospital Infection.* 2009;62(4):525-26.
- Muhammad SM, Shoaib A, Rashid N, Naresh KK, Mukhtar AM. Hepatitis B vaccination status in health care worker of two university hospitals. *J LUMHS.* 2007:48-51.
- Centers for Disease Control and Prevention. Summary of notifiable diseases, United States, *MMWR Morb Mortal Wkly Rep.* 1997;45:74-9.
- Avjot Mighlani. Knowledge and Awareness Regarding Hepatitis B Vaccination among Medical Fraternity. *International Journal of Basic and Applied Medical Sciences.* 2014;4(2):99-102.
- Kasetty S, Mohania A, Dwivedi D, Tijare M, Kallianpur S, Gupta S. A Cross-Sectional Study on the Knowledge of Hepatitis B Infection among Dental Professionals. *Journal of Virology & Microbiology* 2013. DOI: 10.5171/2013.288280.
- Kumar S, Begum R, Umar U, Kumari P. Hepatitis B Seropositivity and Vaccination Coverage among Health Care Workers in a Tertiary Care Hospital in Moradabad, UP, India. *International Journal of Scientific Study.* 2014;1:4.
- Hussain S, Patrick NA, Shams R. Hepatitis B and C Prevalence and Prevention Awareness among Health Care Workers in a Tertiary Care Hospital. *International Journal of Pathology.* 2010;8(1):16-21.
- Chandra S, Joshi Go, Singh Y. Hepatitis B vaccination status among healthcare workers in a tertiary care hospital in Haldwani City of Nainital, Uttarakhand, India. *Ann Trop Med Public Health.* 2014;2(7):96-9.

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