

Assessment of knowledge, attitude & practices towards immunization against Hepatitis B virus infection amongst medical students in a medical college in Mangalore

Ahmed K Saleem¹, Tanvi V Shetty^{2*}, Mohandas Rai³, Sharath Kumar K⁴

^{1,2}Post graduate, ³Professor & HOD, ⁴Assistant Professor, Dept of Pharmacology, AJ institute of Medical Sciences & Research Centre, Mangalore, India

***Corresponding Author:**
Email: tanvishetty@gmail.com

Abstract

Introduction: Infection by Hepatitis B virus is the cause of chronic hepatitis, liver cirrhosis and hepato-cellular carcinoma worldwide. It's estimated that almost 257 million of the world population have contracted the infection, of them there are 350 thousand with chronic infection. Health care professionals are at an increased risk of contracting the infection. Vaccination against Hepatitis B can prevent this deadly disease. Hepatitis B vaccine has outstanding record of safety and is also 95% effective in preventing children and adults from developing chronic infection.

Methods: A cross-sectional questionnaire based study was conducted among 200 medical graduates in their 3rd and 4th year of MBBS to assess Knowledge, Attitude & Practices towards immunization against Hepatitis B Infection.

Results: Overall knowledge among 4th year medical graduates regarding Hepatitis B infection & immunization was higher than 3rd year students. Above 90% of final year graduates have completed the whole schedule of immunization as recommended by Centres for Disease Control for prevention of Hepatitis transmission among Health care professionals. A positive attitude towards vaccination was seen among 95% of medical graduates.

Keywords: Hepatitis B, Immunization, Medical Graduates.

Introduction

Hepatitis B virus (HBV) infection is of global significance and is among the major diseases of humankind. In developing countries, infection related to Hepatitis B and C virus have become a serious problem of public health and is a major contributor to morbidity and mortality among health care professionals.⁽¹⁾ As per WHO record here are about 257 million people who have been infected by Hepatitis B virus (HBV) and In 2015, hepatitis B resulted in 887 000 deaths, mostly from complications including cirrhosis and hepatocellular carcinoma. India has intermediate endemicity of hepatitis B, with an estimated 40 million people known to be carriers.⁽²⁾

Hepatitis B is a vaccine-preventable disease and vaccination is safe and almost 95% effective in preventing children and adults from developing chronic infection.⁽³⁾ Health care professionals (HCPs) may be exposed to the risk of infection with blood-borne viruses such as HBV, hepatitis C virus (HCV) and human immunodeficiency virus (HIV) via contact with blood and other body fluids in the course of their work.⁽⁴⁾ Doctors can easily get infected with the highly infectious Hepatitis B virus in hospital and clinic settings with consequent morbidity and mortality. Although Hepatitis B infection is completely preventable by following a simple and widely available vaccination schedule yet doctors continue to get infected with this disease. Knowledge regarding the Hepatitis B virus transmission and safety precautions

are needed to minimize infections among health personnel.⁽⁵⁾

Aim

To assess the Knowledge, Attitude & Practices among medical under graduates towards Immunization against Hepatitis B Virus at a medical college in Mangalore.

Method

The study was carried out in a medical college in Mangalore, Karnataka. Medical students who completed their second year of MBBS was included in the study. A cross sectional questionnaire based study was conducted among 200 medical graduates in their third or final year of MBBS study. Data collection was carried out using a self-administered, close-ended structured questionnaire to assess the Knowledge, Attitude & Practices (KAP) regarding HBV infection and vaccination. Questionnaire was given out to medical students and collected after completion. Verbal consent was obtained and written consent was taken, from those who volunteered to participate.

Results

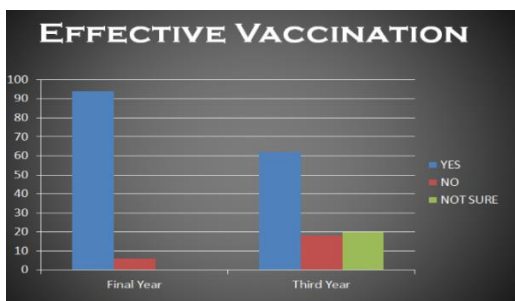


Fig. 1

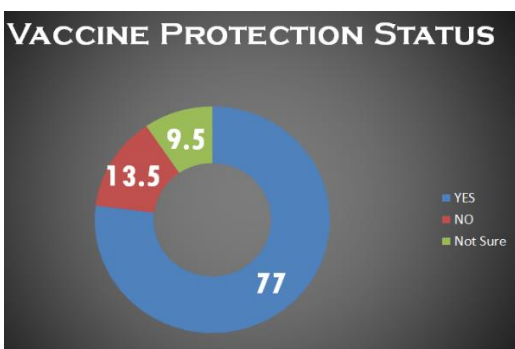


Fig. 2

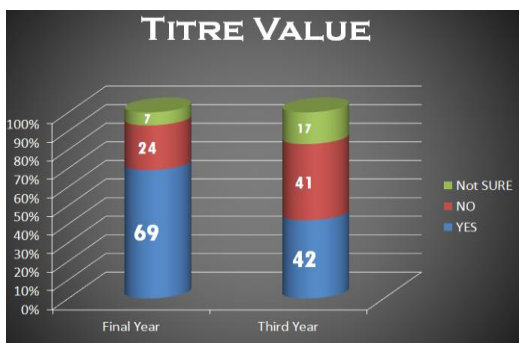


Fig. 3

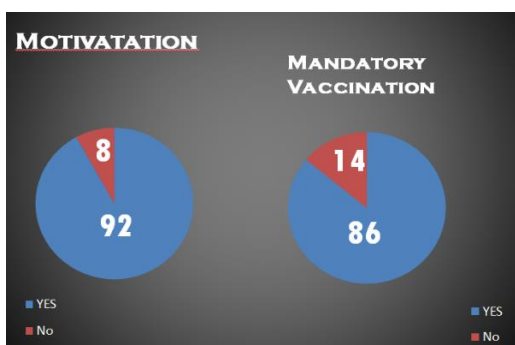


Fig. 4

Hepatitis B virus (HBV) infection is an occupational health hazard preventable by vaccination. 91% of final year students know that Hep B is a vaccine preventable and there is an effective vaccination for the same as compared to 61% among third year students

(Fig. 1). 77% of participants knew that getting vaccinated offers a protection from infection for 15 years (Fig. 2). 69% of final year and 42% of third year students are aware that a titre value of more than 10 ml U/ml is needed for protection from Hepatitis B infection (Fig. 3). 86% of students feel that vaccination against hepatitis B should be mandatory for HCP's. 92% of students are willing to motivate others and encourage them to get vaccinated against Hepatitis B. 88% of students believe vaccination is needed even though we are taking precautionary measures when exposed to at risk cases (Fig. 4). 67% of participants enrolled for the study are vaccinated against Hepatitis B.

Discussion:

Hepatitis B virus (HBV) infection is an occupational risk for health care professionals especially in developing countries which has a carrier rate of about 4%. Every year HBV infection accounts for 1.1 million cases. As such, incidence of HBV infection can only be brought down by giving proper education regarding its transmission and also getting medical students immunized with Hepatitis B vaccine. The number of students getting immunized showed an increase due to awareness created to them during their medical curriculum.

The present study concludes that there is an increased awareness among medical students regarding the need to be vaccinated against Hepatitis B. However all the students were not vaccinated against Hepatitis B, which make them vulnerable to the disease. The reason as to why vaccination was not taken by few students needs to be addressed and make them realise the importance of vaccination. Since medical students are at increased risk of acquiring needle stick injury, and also due to increased prevalence rate of Hepatitis B in India, medical students should mandatorily be vaccinated upon entry into the medical college. It is recommended that a policy be in place for complete vaccination and health education of all medical students upon enrolling into MBBS course. Its also important to routinely check antibody titre and if its below 10 ml U/ml a booster dose be advised.

Conclusion

This study highlighted the need to have medical graduates educated regarding significance of immunization against vaccine preventable hospital acquired infection like hepatitis and how vaccination can play in reducing morbidity and mortality among health care professionals. Encouraging Hepatitis B immunization practice among medical graduates can significantly reduce incidence of infection among health care professionals and its advisable that all medical schools make it mandatory to have its students vaccinated during their course of study as they are likely to be exposed to patients with hepatitis.

References

1. Park J.E., Park K. - Text Book of Preventive and Social Medicine, 19th Edition, M.S. Banarsidas. Bhanot, Jabalpur. 267, 2007.
2. World Health Organization. Hepatitis B Fact sheets. Reviewed july 2017. <http://www.who.int/mediacentre/factsheets/fs204/en/>
3. Malik A.H., Lee W.M. - Chronic Hepatitis B Virus Infection. Treatment Strategies for the next Millenium. Annals of Internal Medicine. Volume 132 (9):723-731, May 2000.
4. Tandon B.N., Acharaya S.K., Tandon A.- Epidemiology of Hepatitis B virus infection in India. Gut. 38(2):56-59, 1996.
5. Waterman J., Jankowski R., Madan I. - Underreporting of needle stick injuries by medical students. *J Hosp Infect.* 26:149-150, 2013.