Original Research Article

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A comparative study among medical and nursing interns about the awareness of hepatitis B infection and knowledge of vaccination status: a cross sectional study

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ABSTRACT

Background: Hepatitis B is a major health problem worldwide and more serious in India. An estimated 240 million people are chronically infected with hepatitis B. Hepatitis B is an important occupational hazard for health workers. However, it can be prevented by currently available safe and effective vaccine. A Study on Awareness of Hepatitis B Infection and Vaccination among Medical Interns and Nursing interns in Santhiram Medical College, Nandyal, Kurnool, Andhra Pradesh.

Methods: A cross-sectional comparative study is done. Students who are present at the time of data collection by a pre structured pre-tested questionnaire given. Data was analyzed by using SPSS 21 version. Data was presented in proportions and chi-square was done for significance with 95% confidence interval.

Results: The study was under taken among the medical interns (80) and nursing interns (70) at Santhiram Medical College, Nandyal. Out of all 150 students 87% all know that the type of infections viral. There is a significant knowledge difference between the medical interns and nursing interns about the knowledge of the modes of transmission i.e. Medical interns have higher knowledge when compared to nursing interns. 97% of medical interns are vaccinated whereas only 50% of nursing interns and also significant difference knowledge about the post exposure prophylaxis 76% in medical interns 19% in nursing interns.

Conclusions: This study showed that overall awareness regarding hepatitis B is at a very basic level among the nursing interns when compared to medical interns of the future and measures need to be taken to create complete awareness.

Keywords: Hepatitis B infection, Medical interns, Nursing students, Hepatitis B vaccination

INTRODUCTION

Hepatitis is an inflammation of the liver, most commonly caused by a viral infection. There are five main hepatitis viruses, referred to as types A, B, C, D and E. In particular, types B and C lead to chronic disease in hundreds of millions of people and, together, are the most common cause of liver cirrhosis and cancer. Hepatitis B is a potentially life threatening liver infection caused by

the hepatitis B virus. It is a major global health problem. It can cause chronic infection and puts people at high risk of death from cirrhosis and liver cancer.¹

An estimated 240 million people are chronically infected with hepatitis B (defined as hepatitis B surface antigen positive for at least 6 months). More than 686000 people die every year due to complications of hepatitis B, including cirrhosis and liver cancer. Viral hepatitis

caused 1.34 million deaths in 2015, a number comparable to deaths caused by tuberculosis and higher than those caused by HIV. However, the number of deaths due to viral hepatitis is increasing over time, while mortality caused by tuberculosis and HIV is declining. Most viral hepatitis deaths in 2015 were due to chronic liver disease (720 000 deaths due to cirrhosis) and primary liver cancer (470000 deaths due to hepatocellular carcinoma). Globally, in 2015, an estimated 257 million people were living with chronic HBV infection.²

Hepatitis B infection is a major health hazard throughout the world and the 10 leading cause of death. Three hundred and fifty million chronic carriers of hepatitis B virus (HBV) are present throughout the world. In India, HBS Ag carriers are about 40 million, i.e. about 4–5% of the entire population, and the transience rate is approximately 1%. Hepatitis B is an important occupational hazard for health workers.

Aims and objectives

- To assess the degree of awareness regarding hepatitis
 B infection among medical and nursing college interns.
- To assess the degree of awareness regarding hepatitis B infection among medical and nursing college interns.

METHODS

Study design and population

This study was a cross sectional study among medical and nursing students who joined our institute this academic year.

Study period

August 1st 2016 to 31st August 2016.

Study area

The study was done in the premises of Santhiram Medical and Nursing College and Hospital; Nandyal, Kurnool district. Andhra Pradesh.

Sampling method

Total population units that are of medical interns are 80 members and nursing interns are of 70 members.

The questionnaire included questions on various aspects of hepatitis B infection such as causative organism, routes of transmission, at-risk groups, screening method, hepatitis B vaccine, study participants vaccination status.

Data collection method

All the students who gave consent for the study were administered the preformed structured questionnaire.

Students were asked to raise queries if they did not understand the questions in the questionnaire.

Statistical analysis

The collected data were entered in MS excel sheet and data analysis was done using SPSS – 21 software. Data were expressed in frequencies and percentages.

RESULTS

The study finally included 150 participants with 54% from medical and the remaining 46% from nursing course (Figure 1).

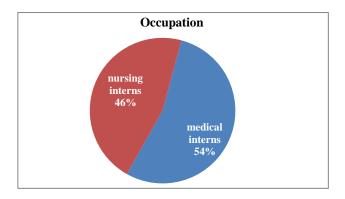


Figure 1: Distribution of population according to their occupation.

Knowledge on hepatitis B

Among the study subjects, 100% reported having heard of hepatitis B. All the medical students 100% members said it is a viral infection where as in nursing only 72% gave the right answer (Table 1). When we asked about the mode of transmission all medical interns gave the right answer for transmission is through blood and body fluids; contaminated blades and ear piercings; vertical transmission from mother to child whereas nursing interns only 86%, 62%, 72% gave the right answer. The knowledge shows highly significant difference; and the mode of transmission through unsafe sex, saliva of infected person only 91% and 81% of medical and 72%, 52% of nursing students gave the right answers (Table 2).

Table 1: Type of infection.

	Course		
Variable	M.B.B.S. (n=80)	Nursing (n=70)	P value
Viral	100% (80)	72% (50)	
Bacterial	0%	16% (11)	<0.01*
Parasitic	0%	12% (9)	

*P<0.05

When we asked about the vaccine availability 100% and 90% of medical and nursing interns gave right answer; and about the inclusion of hepatitis B vaccine in

immunisation schedules 100% and 91% of medical and nursing interns know the right answer. When asked about the post exposure prophylaxis surprisingly only 19% of nursing interns know about the PEP, and its composition.

When we asked about the vaccination status 96% of medical and only 50% of medical interns are vaccinated (Table 3).

Table 2: Knowledge about the modes of transmission.

	Course				
Variable	M.B.B.S. (n=80)		Nursing(n=7	Nursing(n=70)	
	Yes	No	Yes	No	
Blood and body fluids	100% (80)	0%	86% (60)	14% (10)	<0.01*
Contaminated blades and ear piercings	100% (80)	0%	62% (43)	38% (27)	<0.01*
Unsafe sex	91% (73)	09% (7)	72% (50)	28% (20)	0.01
Vertical transmission from mother to child	100% (80)	0%	72% (50)	28% (20)	<0.01*
Saliva of infected person	81% (65)	19% (5)	52% (36)	48% (34)	<0.01*

^{*}P<0.05

Table 3: Knowledge about vaccination.

	Course				
Variable	M.B.B.S. (n=80)		Nursing (n=7	Nursing (n=70)	
	Yes	No	Yes	No	P value
Is hepatitis B vaccine available	100% (80)	0%	91% (63)	9% (7)	0.07
Is hepatitis B vaccine included in vaccination schedule	100% (80)	0%	97% (61)	3% (9)	0.12
Did you get vaccination	96% (77)	4% (3)	50% (35)	50% (35)	<0.01*
Does Post exposure prophylaxis (PEP) for hepatitis B	96% (77)	4% (3)	19% (15)	81% (55)	<0.01*

^{*}P<0.05

DISCUSSION

Our study is mainly aimed to evaluate knowledge and awareness among the medical and nursing interns about the hepatitis B infection and vaccination. Over all the study results showed there is a significant knowledge difference between medical and nursing courses. The knowledge about what type of infection is hepatitis b bacterial, viral, parasitic is lacking among the nursing interns. Even knowledge about the modes of transmission there is a significance difference between the medical and nursing interns. Basic knowledge about the hepatitis b is important to the common man also. For medical and Para medical staff technical and scientific knowledge is more important. When we see knowledge about the modes of transmission among the whole like blood and body fluids (93%), infected blades and ear piercing (87%), unsafe sex (82%), vertical transmission from mother to child (87%) transmitted to saliva of infected person (68%); about vaccination that is vaccine is available (96%), vaccination status (75%) got vaccinated. about post exposure prophylaxis only (59%) know about it.

A study conducted in Chennai between medical and dental students the basic knowledge about the hepatitis b like type of infection (90%) Knowledge about transmission of hepatitis B through blood transfusion

(23.2%), exposure to infected body fluids (24%), contaminated needles (14.2%), infected razors and blades (3.7%) and vertical transmission from mother to child (8.5%). The subject level knowledge is low when compared to our study. About the immunisation status among the students in this study are only 74% which is low when compared to our study.⁴

In the study conducted in Kakinada among the medical students between 4th and 6th semester students about the mode of transmission of the disease only 77.5% gave right answer. About the vaccination status only 57% of medical students got vaccinated.⁵ The knowledge is low when compared to our study.

A study conducted in Bhubaneswar, Odisha among the medical, dental and nursing students. In this study the knowledge of medical students and nursing students about the modes on transmissions 100% and 97%; significant difference has been observed among the medical and nursing students about the knowledge about hepatitis b, modes of transmission; about vaccination and post exposure prophylaxis which is similar to our study.⁶

CONCLUSION

Over all the study showed there is fair awareness in medical interns when compared to nursing interns. Some

of the nursing interns do not know what type of infection is hepatitis B. In medical interns also some of them does not know that saliva of infected person is also one of the mode of transmission. When we come to the vaccination only half of the nursing interns are vaccinated this suggests that the awareness programmes should be conducted among the medical and nursing personals in the student level only. Because nursing personals are the first person to handle the patient in emergency in the absence of doctors so they have more chances of getting infected and having a carrier state. So information and education programmes should be conducted among the health care personals in their students and training period only.

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Ethical approval: The study was approved by the

Institutional Ethics Committee

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