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Original Research Article.

Assessment of Hepatitis B Awareness among Final Year Medical Students And Their Vaccination Status at Tabuk University

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ABSTRACT

Introduction: Hepatitis B virus (HBV) it is double-stranded circular DNA virus and member of the Hepadnaviridae family of viruses. Hepatitis B virus (HBV) infection is a serious global health problem, with two billion people infected worldwide and 350 million suffering from chronic HBV infection. At least one million people die annually from HBV related chronic liver disease. Healthcare professionals are at an increased risk of acquiring blood-borne infectious diseases. These individuals are prone to needle-stick injuries during procedures, leading to inadvertent inoculation of infected blood.

Methodology: A cross-sectional study was conducted among final year medical students at University of Tabuk to assess their knowledge about HBV and vaccination status.

Results: A total of 55 final year medical students responded to the questionnaire, 60% were female, and 40 % were male. 94.5 % of the students received the HBV vaccine. Only half of the male participants (59%), and (36.3%) of the female participant received all 3 doses of the vaccine.

Conclusion: Medical students had a medium to good level of compliance with the HBV vaccination program, regardless of their knowledge and awareness of the disease and vaccination.

Keywords: Hepatitis, Cirrhosis, Liver, Saudi Arabia.

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INTRODUCTION

Hepatitis B virus (HBV) it is double-stranded circular DNA virus and member of the Hepadnaviridae family of viruses.[1,2]

Hepatitis B virus (HBV) infection is a serious global health problem, with two billion people infected worldwide and 350 million suffering from chronic HBV infection.[3] At least one million people die annually from HBV related chronic liver disease.[4]

Patient with Acute hepatitis B infection may present with prodromal symptoms like anorexia, chills, headache, nausea, vomiting, and malaise. Development of jaundice may then occur but is noted in only 30% of all patients with acute infection.

During the chronic phase, manifestations range from an asymptomatic carrier state to chronic hepatitis, cirrhosis, and hepatocellular carcinoma. Extrahepatic manifestations also can occur with both acute and chronic infection.

HBV is transmitted via direct blood to blood contact, vertically from mother to child, and unprotected sexual intercourse. Risk factors associated with this infection include blood transfusions, dialysis, drug abuse, tattoo sand dental procedures.[5]

Chronic infection with the HBV may be either asymptomatic or associated with chronic inflammation of the liver. After 10 years of chronic infection, about 20% of the patients with hepatitis B have progressed to cirrhosis and about 5% have developed HCC.[6] Chronically infected HBV patients have a 15–25% risk of dying prematurely due to HBV-related cirrhosis and HCC.[7] Hepatitis B is estimated to be the cause of 30% of cirrhosis and 53% of HCC worldwide.[8] Also of note, hepatitis B virus has been linked to membranous glomerulonephritis.[9] Given HBV and its ability to affect multiple organ systems including the liver and kidney, chronic infection is of particular concern.

HBV infection can be easily prevented. A vaccine, which is both safe and effective, is readily available.[10] Healthcare professionals are at an increased risk of acquiring blood-borne infectious diseases.[11-13] These individuals are prone to needle-stick injuries during procedures, leading to inadvertent inoculation of infected blood.[5]

METHODOLOGY

This is a cross-sectional study was conducted among final year medical students at University of Tabuk, KSA. The questionnaire contained questions about demographic data, items regarding the

knowledge about hepatitis B virus causative agent, mode of transmission, prevention and vaccination status of study participants.

Ethical Consideration

Study was explained to participant and informed consent was taken from the participant.

Statistical Analysis

The collected Data were entered and analyzed using the Statistical Package for Social Sciences (SPSS) statistical program version 19.

RESULTS

A total of 55 final year medical students responded to the questionnaire, 60% were female, and 40 % were male. 3.6% were married, 80 % non-smoker, 16.4% smoker, 3.6 % ex-smoker. (Table1) Regarding compliance with the vaccination program, 94.5 % (n = 52) received the HBV vaccine. Approximately half of the male participants (59%, n = 13), and (36.3%, n=12) of the female participant received all 3 doses of the vaccine. (Figure 1)

The study revealed a good level of knowledge about hepatitis B among the participants, around 96.4% of participants (20 out of 22 male students (90.9%) and 32 out of 33 female student (96.9%) are aware of hepatitis B infection, 96.4% (53 out of 55 students) knew that hepatitis B caused by a viral agent, 92.7 % of the participants truly identified the symptoms of hepatitis B. Regarding mode of spread of hepatitis B, 92.7% of participants knew that hepatitis B spread via blood transfusion, 61.8% spread via Sexual intercourse and 58.2% spread through mother to her child. (Figure 2)

92.7% of the participant believe that health care providers are more borne to get hepatitis via cross infection, 96.4% believe that hepatitis B can be prevented and 90.2% believe that hepatitis B vaccination protect against the infection.

According to hepatitis related complication most common complication identified by the participants are cirrhosis (83%), Liver cancer (50%) and liver disease (30%). (Figure 3)

Table 1: Descriptive characteristics of the participants

		Number	Percentage
Gender	**Female**	**33**	**60%**
	Male	**22**	**40%**
Marital status	**Single**	**53**	**96.4%**
	Married	**2**	**3.6%**
Smoking	**Non Smoker**	**44**	**80%**
	Smoker	**9**	**16.4%**
	Ex-Smoker	**2**	**3.6%**

Figure 1: Shown vaccination status of the participants.

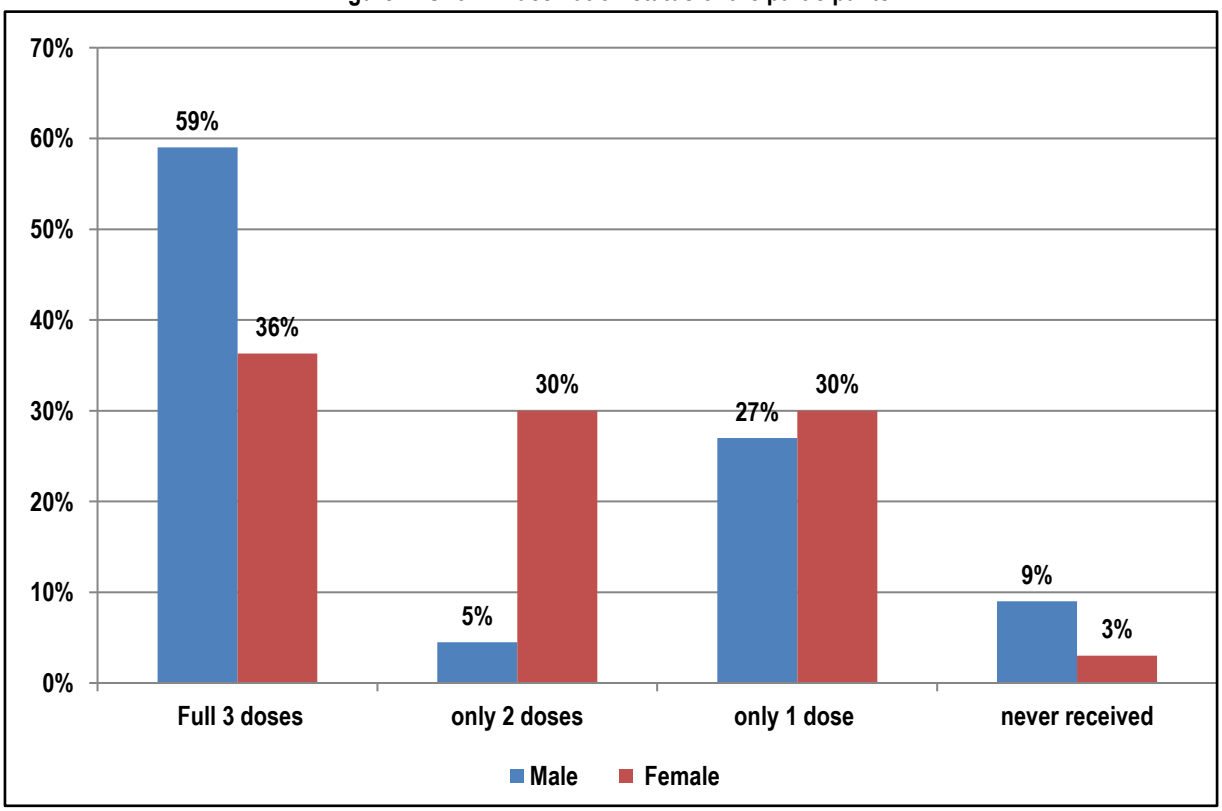


Figure 2: Shown the most mode of transmission indicated by participants.

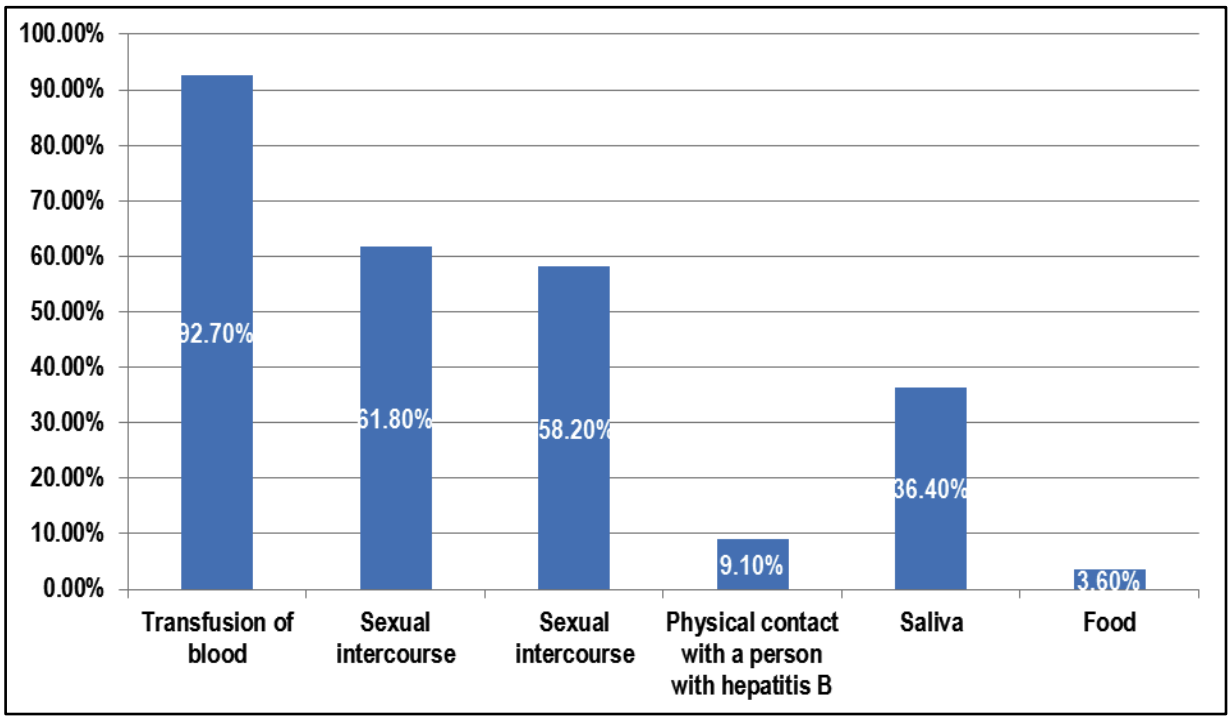
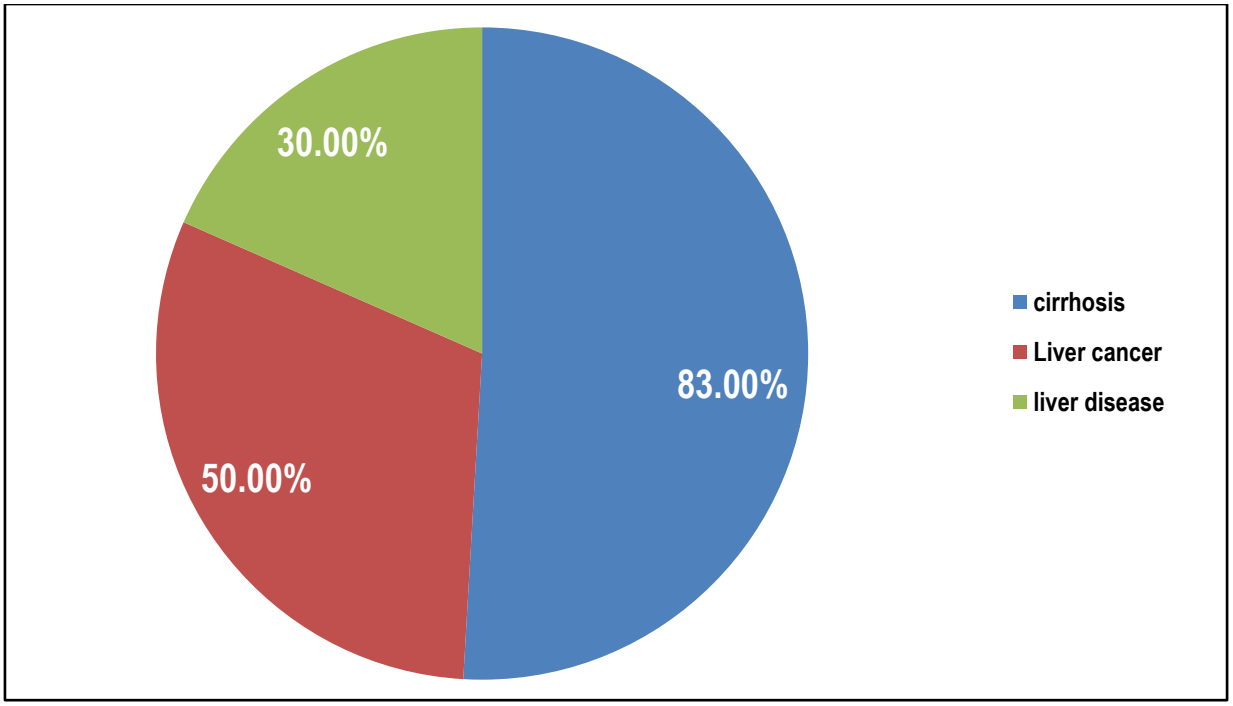


Figure 3: Most common complication identified by the participants



DISCUSSION

This study showed that the final-year medical students have medium to good knowledge and awareness about hepatitis B, routes of transmission, and modes of preventions. Only 45.5% (n = 25) of the final-year students were receive the 3 doses of hepatitis B vaccine, which makes them vulnerable to the disease. However, the survey also shows that most of the students (96.4%) were aware of hepatitis.

According to a Al-Ghamdi study on medical students, anti-HBs levels were low in many students. Therefore, testing medical students for anti-HBs levels may be warranted as they represent a high-risk population.[14] An important issue about the medical students' knowledge about this life-threating infection and the need of further HBV education. Therefore, steps such as education about importance of HBV vaccination are required.

CONCLUSION

Medical students had a medium to good level of compliance with the HBV vaccination program, regardless of their knowledge and awareness of the disease and vaccination. Steps such as education about importance of HBV vaccination are required to improve the heath states and to the increase compliance rate among medical students.

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