Knowledge, Attitude and Practice of Health Workers Concerning the Occupational Risks of Hepatitis B Virus in Asser Region

Viqar Basharat, MD* Arwa Ayed M Alshahrani, MBBS** Haifa' Hisham A Alwabel, MBBS** Raghad Saad Hasan Alshahrani, MBBS** Sarah Mohammed Awadh Alqahtani, MBBS** Abdussalam Mohammed A Alqhtani, MBBS** Ahmed Saad Thabet, MBBS** Aeyd Jobran Aeyd Alhashim, MBBS** Abdulrahman Saad M Alahmari, MBBS** Rahaf Abdulrahman Almehery, MBBS** Meteb Ali Shaban Ahmed, MBBS** Hajar Ayed Asiri, MBBS*** Ghazi Awadh Alqahtani, MBBS*** Mosa Ayed Alahmari, MBBS***

ABSTRACT

The hepatitis B virus (HBV) is one of the most common causes of acute and chronic liver disease throughout the world. Uganda is one of the most endemic countries in Sub-Saharan Africa, with over 1.4 million chronically infected individuals. In the United States, 0.4 to 1.6 % of adults have chronic HBV infection; in Europe, 1.2 to 2.6 %; in Southeast Asia, 1.5 to 4.0 %; in the Eastern Mediterranean, 2.6 to 4.3 %; in the Western Pacific, 5.1 to 7.6 %; and in Africa, 4.6 to 8.5 %.

Methods: A purposefully developed questionnaire was used to collect data in this cross-sectional investigation. A questionnaire containing demographic questions as well as questions about health workers' knowledge, attitudes, and practices regarding hepatitis B virus occupational risks. After a series of conversations with the panel of experts (which included a subject specialist, a researcher, and a language expert), a questionnaire was created.

Results: Out of total 588 respondents ,15 (2.6%) did not responded, Cronbach alpha of the questionnaire was 0.84. As per table 1, from all respondents 92.3% lives in Aseer region,87.2% were working in a health profession, 59.2% were females while 38.3% were males. we have compared impact of hepatitis B on liver cancer with demographic variables i.e., age, gender and we did not observe any significant differences.

Conclusion: It may be stated that the majority of health care workers in hospitals are aware of the HBV infection. Efforts to create and conduct hepatitis B educational campaigns/health promotion for these groups should continue.

Keywords: Knowledge, Attitude practice health workers, Occupational risks hepatitis B virus

INTRODUCTION

The hepatitis B virus (HBV) is one of the most common causes of acute and chronic liver disease throughout the world. Uganda is one of the most endemic countries in Sub-Saharan Africa, with over 1.4 million chronically infected individuals. In the United States, 0.4 to 1.6 % of adults have chronic HBV infection; in Europe, 1.2 to 2.6 %; in Southeast Asia, 1.5 to 4.0 %; in the Eastern Mediterranean, 2.6 to 4.3 %; in the Western Pacific, 5.1 to 7.6 %; and in Africa, 4.6 to 8.5 %[1-3].

The wide variation in chronic HBV infection prevalence across the globe is mostly due to changes in infection age, which is inversely associated to the risk of chronicity. For perinatal acquired infection, the rate of progression from acute to chronic HBV infection is roughly 90%, 20 to 50% for infections between the ages of one and five years, and less than 5% for adult-acquired infection. Saudi Arabia's overall prevalence of HBsAg is estimated to be 8.3 %, making it one of the world's most endemic places for HBV infection[4,5].

Healthcare workers (HCWs), such as nurses and midwives, were at an elevated risk of exposure and illness acquisition if personal protective measures were not used adequately. Continuous HBV transmission could be connected to a lack of understanding about HBV prevalence and workplace safety measures such HBV vaccination, post-exposure prophylaxis (PEP), training, and the adoption of safer working practices. Unvaccinated HCWSs face significant risks from sharps handling and needle stick injuries (NSI), which can expose them to a range of diseases, including HBV[6-9].

Knowledge, attitude and practice (KAP) have an effect on health-related behaviors. However, few studies in KSA have looked at the KAP levels of HCWSs in relation to HBV infection. KAP surveys are widely utilized in public health research and are said to be the most regularly used study tool in health-seeking behavior research[10,11]. KAP studies have been used to gather data on what participants know, believe, and do about a specific issue The understanding of any specific issue is referred to as knowledge Their attitude refers to how they feel about the issue, any preconceived notions they may have about it, their intention to engage in a specific behavior, and their proclivity to behave in a specific way in a specific situation[12,13].

* Assistant Professor of Gastroenterology
Department of Medicine
College of Medicine, King Khalid University
Saudi Arabia. E-mail: Viqarbisharat@gmail.com
** Medical Intern
*** Medical student
King Khalid University
Saudi Arabia

The goal of this study was to look into health workers' attitudes concerning HBV infection in order to inform HBV infection prevention and control efforts in Aseer region KSA.

METHODS

A purposefully developed questionnaire was used to collect data in this cross-sectional investigation. A questionnaire containing demographic questions as well as questions about health workers' knowledge, attitudes and practices regarding hepatitis B virus occupational risks. After a series of conversations with the panel of experts (which included a subject specialist, a researcher, and a language expert), a questionnaire was created. The questionnaire's Cronbach alpha was computed. The research was carried out in Saudi Arabia's Aseer region. The questionnaire contained questions about HPV awareness, demographic characteristics, and vaccine awareness. as well as other objects.

Data were collected, coded, and entered into the SPSS ver.20 software for descriptive statistics (mean standard deviation, frequencies, and % s were computed) and to determine the significance of differences. At a 5% level of significance, the t-test and chi-square test were performed. An electronic version of the questionnaire was used to collect data from health care centers in the Aseer region of Saudi Arabia. King Khalid University in Saudi Arabia provided ethical approval. The trial lasted from November 2021 to February 2022.

RESULTS

Out of total 588 respondents ,15 (2.6%) did not responded, Cronbach alpha of the questionnaire was 0.84. As per table 1, from all respondents 92.3% lives in Aseer region, 87.2% were working in a health profession, 59.2% were females while 38.3% were males, 92.3% have age lies between 18-39, 71.9% were working in public hospital, 89.8% have less than or equals to 5 years of experience, 77% were doctors, 69.4% were living in city areas while rest in villages.

Table 1: Demographics

Lives in Aseer	**Frequency**	**%**
yes	543	92.3
no	30	5.1
Total	573	97.4
Missing System	15	2.6
Total	588	100.0
Are You Working as a health worker?	**Frequency**	**%**
yes	513	87.2
no	60	10.2
Total	573	97.4
Missing System	15	2.6
Total	588	100.0
Gender	**Frequency**	**%**
male	225	38.3
female	348	59.2
Total	573	97.4
Missing System	15	2.6
Total	588	100.0
Age	**Frequency**	**%**
18-29	543	92.3
30-39	30	5.1
Total	573	97.4
Missing System	15	2.6
Total	588	100.0
Workplace	**Frequency**	**%**
Primary health unit	60	10.2
Public hospital	423	71.9
Private hospital	90	15.3
Total	573	97.4
Missing System	15	2.6
Total	588	100.0
Years in Practice	**Frequency**	**%**
≤5 years	528	89.8
>5–10 years	15	2.6
>10–20 years	30	5.1
Total	573	97.4
Missing System	15	2.6
Total	588	100.0
Specialty	**Frequency**	**%**
Doctor	453	77.0
Nurse	30	5.1
Lab technician	45	7.7
Paramedics	45	7.7
Total	573	97.4
Missing System	15	2.6
Total	588	100.0
Place of live	**Frequency**	**%**
City	408	69.4
village	165	28.1
Total	573	97.4
Missing System	15	2.6
Total	588	100.0

In table 2 we have compared impact of hepatitis B on liver cancer with demographic variables i.e. age, gender and we did not observe any significant differences.

Table 2: Comparison between demographics and HBV causes liver diseases

		Does hepatitis B cause liver cancer?		
		yes	**no**	**I don't know**
Gender	male	(73%)165	0	(27%)60
	female	(87%)303	(4%)15	(9%)30
Total		468 (82%)	(3%)15	(15%)90
P value=41.18				
		Does hepatitis B cause liver cancer?		
		yes	**no**	**I don't know**
Age in Years	18-29	(81%)438	(3%)15	(17%)90
	30-39	(100%)30	(0%)0	(0%)0
Total		(82%)468	(3%)15	(16%)90
P value=7.10				
		Does hepatitis B cause liver cancer?		
		yes	**no**	**I don't know**
Working Place	Primary health unit	(75%)45	(0%)0	(25%)15
	Public hospital	(93%)393	(0%)0	(7%)30
	Private hospital	(33%)30	(17%)15	(50%)45
Total		(82%)468	(3%)15	(15%)90
P=20.5				

In table 3 we did not observe any significant differences between specialties and impact of Hepatitis B on Cancer.

Table 3: Does hepatitis B cause liver cancer

	Does hepatitis B cause liver cancer?		
Specialty	**Yes**	**No**	**I don't know**
Doctor	408 (90%)	(0%)0	(10%)45
Nurse	30(100%)	(0%)0	(0%)0
Technicians	15 (33%)	15 (33%)	(34%)15
Paramedics	15 (33%)	(0%)0	(67%)30
Total	468	15	90
p=30.4			

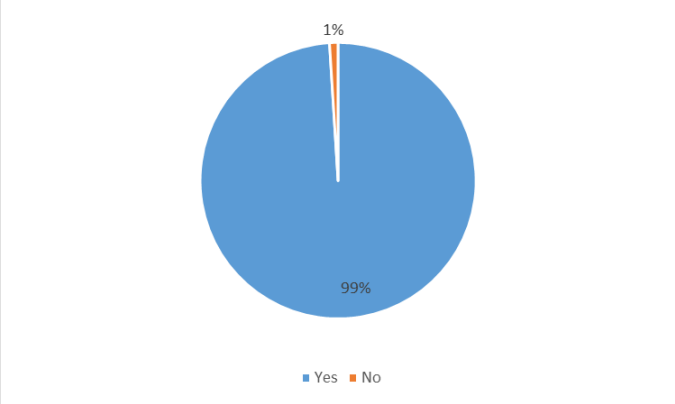

Figure 1: Knowledge about Hepatitus B

Figure 1 depicted that 99.0% of the respondents have a knowledge about the Hepatitis B

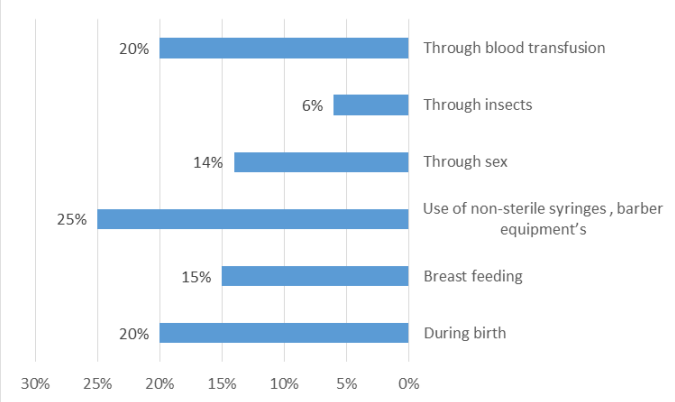

Figure 2: Cause of Hepatitis

As per the opinion regarding the causes of Hepatitis B we have observed these responses During birth 20% ,Breast feeding15% , Use of non-sterile syringes , barber equipment's25% , Through sex14% , Through insects 6% , Through blood transfusion 20% (Figure 2)

DISCUSSION

This study examined the Knowledge towards HBV among health professionals in Aseer region. In contrast of other studies almost all respondents in our study have awareness regarding Hepatitis B Other studies reported that the level of the knowledge of hepatitis is low among different populations, including HCW, in several areas worldwide[14-17].

Hepatocellular carcinoma (HCC) is the most frequent type of liver cancer, with chronic hepatitis B virus (HBV) or hepatitis C virus (HCV) infections accounting for around 80% of cases[16] which is quite in line with our findings but interestingly demographic variables have no impact on information related that hepatitis will cause the liver cancer, which is in line with other studies as well. Participants in this study had good HBV infection practice. Participants pay great attention to preventive measures against HBV virus spread.

In our study we have questioned about the causes of the hepatitis, Breast feeding15%, Use of non-sterile syringes, barber equipment's 25%, Through sex 14%, Through insects 6%, Through blood transfusion 20%, which is in line with other studies[18].

Other research has found that age urban residency, and college name are statistically significant predictors of good hepatitis B infection prevention practice, albeit these correlations were not statistically significant in our study[19].

CONCLUSION

It may be stated that the majority of health care workers in hospitals are aware of the HBV infection. Efforts to create and conduct hepatitis B educational campaigns/health promotion for these groups should continue. Further there is a strong need to provide awareness regarding the causes, symptoms, treatments o Hepatitis B virus and its relationship with liver cancer.

Authorship Contribution: All authors share equal effort contribution towards (1) substantial contributions to conception and design, analysis and interpretation of data; (2) drafting the article and revising it critically for important intellectual content; and (3) final approval of the manuscript version to be published. Yes.

Potential Conflict of Interest: None

Competing Interest: None

Acceptance Date: 31 March 2022

REFERENCES

1. Higuera-Mendieta DR, Cortés-Corrales S, Quintero J, et al. KAP Surveys and Dengue Control in Colombia: Disentangling the Effect of Sociodemographic Factors Using Multiple Correspondence Analysis. PLoS Negl Trop Dis 2016;10(9):e0005016.
2. Haq N, Hassali MA, Shafie AA, et al. A cross-sectional assessment of knowledge, attitude and practice among Hepatitis-B patients in Quetta, Pakistan. BMC Public Health 2013;13:448.
3. WHO. Advocacy, communication and social mobilization for TB control: a guide to developing knowledge, attitude and practice surveys. Geneva 2008.
4. Kaliyaperumal K. Guideline for conducting a knowledge, attitude and practice (KAP) study. Commun Ophthalmol 2004;4(1):7-9.
5. Badran IG. Knowledge, attitude and practice the three pillars of excellence and wisdom: a place in the medical profession. East Mediterr Health J 1995;1:8-16.
6. Ahmad A, Sann LM, Rahman HA. Factors associated with knowledge, attitude and practice related to hepatitis B and C among international students of Universiti Putra Malaysia. BMC Public Health 2016;16:611.
7. Chao J, Chang ET, So SK. Hepatitis B and liver cancer knowledge and practices among healthcare and public health professionals in China: a cross-sectional study. BMC Public Health 2010;10:98.

8. Ataei B, Meidani M, Khosravi M, et al. Knowledge, attitude, and performance of medical staff of teaching healthcare settings about hepatitis B and C in Isfahan, Iran. Adv Biomed Res 2014;3:267.
9. Elsheikh TA, Balla SA, Abdalla AA, et al. Knowledge, Attitude and Practice of Heath Care Workers Regarding Transmission and Prevention of Hepatitis B Virus Infection, White Nile State, Sudan, 2013. Am J Health Res 2016;4(2):18-22.
10. Brouard C, Gautier A, Saboni L, et al. Hepatitis B knowledge, perceptions and practices in the French general population: the room for improvement. BMC Public Health 2013;13:576.
11. Joukar F, Mansour-Ghanaei F, Naghipour MR, et al. Nurses' Knowledge toward Hepatitis B and Hepatitis C in Guilan, Iran. Open Nurs J 2017;11:34-42.
12. Centres for Disease Control and Prevention (CDC). Updated US public health services for the management of occupational exposure to HBV, HCV and HIV and Recommendations for Postexposure Prophylaxis. Infect Dis Clin Pract 2001;10(6):338-40.
13. Arafa AE, Mohamed AA, Anwar MM. Nurses' knowledge and practice of blood-borne pathogens and infection control measures in selected Beni-Suef hospitals Egypt. J Egypt Public Health 2016;91(3):120-6.
14. Aniaku JK, Amedonu EK, Fusheini A. Assessment of Knowledge, Attitude and Vaccination Status of Hepatitis B among Nursing Training Students in Ho, Ghana. Annals of Global Health 2019;85(1):18.
15. Rathi A, Kumar V, Majhi J, et al. Assessment of knowledge, attitude, and practices towards prevention of hepatitis B infection among medical students in a high-risk setting of a newly established medical institution. J Lab Physicians 2018;10(4):374-9.
16. Haq N, Hassali MA, Shafie AA, et al. A cross sectional assessment of knowledge, attitude and practice towards Hepatitis B among healthy population of Quetta, Pakistan. BMC Public Health 2012;12:692.
17. Taylor VM, Yasui Y, Burke N, et al. Hepatitis B knowledge and testing among Vietnamese-American women. Ethn Dis 2005;15(4):761-7.
18. Al-Hussami M. Knowledge and acceptance of hepatitis B vaccine. Internet Journal of Health Care Administration 2001;2.
19. Creswell JW, Creswell JD. Research Design: Qualitative, Quantitative, and Mixed Methods Approach. 5th ed. Los Angeles: Sage Publications, Inc 2018.