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Research Article

**ANALYSIS OF KNOWLEDGE AND AWARENESS OF
HEPATITIS B VIRUS INFECTION AMONG PREGNANT
WOMEN OF PAKISTAN**¹Dr. Aneeqa Khan, ¹Dr. Sundas Fatima, ¹Dr. Komal Nadir
¹Bahawal Victoria Hospital, Bahawalpur**Abstract:**

Introduction: Hepatitis B virus (HBV) infection remains a serious global public health problem. Globally, there are an estimated 240 million people chronically infected with HBV, with more than 686,000 deaths annually due to complications of hepatitis B, including cirrhosis and hepatocellular carcinoma. **Objectives of the study:** The main objective of the study is to find the Knowledge and awareness of Hepatitis B virus infection among pregnant women of Pakistan. **Material and methods:** This study was conducted at Bahawal Victoria hospital, Bahawalpur during Dec 2017 to May 2018. The group of participants comprised both genders and inclusion criteria required participants to be 18 years of age and provide signed, informed consent. A sample size of 100 individuals for each location was targeted. **Results:** Independent factors associated with insufficient reduced HBV knowledge include women outside the healthcare sector, lower education level, and no previous HBV testing. The majority of respondents could provide correct responses about the common aspects of HBV infection, including screening, blood-borne and perinatal transmissions, prevention by vaccination, and sequelae of HBV infection. **Conclusion:** It is concluded that pregnant women of Pakistan had insufficient knowledge regarding HBV infection.

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INTRODUCTION:

Hepatitis B virus (HBV) infection remains a serious global public health problem. Globally, there are an estimated 240 million people chronically infected with HBV, with more than 686,000 deaths annually due to complications of hepatitis B, including cirrhosis and hepatocellular carcinoma. Hepatitis B prevalence is highest in sub-Saharan and East Asia, where 5–10% of population is chronically infected. In China, a 2006 national survey found a prevalence of hepatitis B surface antigen (HBsAg) to be 7.6% among women of childbearing age, and a recent study of 15 million couples in rural China demonstrated a sero prevalence of 5.2% in women 20–49 years old [1].

Viral hepatitis is an emerging global health problem. In 2015, an estimated 1.34 million deaths occurred due to viral hepatitis globally. This number is equal to deaths caused by tuberculosis and higher than those deaths caused by human immunodeficiency virus. In the same year, hepatitis B and C viruses (HBV&HCV) alone were responsible for 96% of hepatitis mortality [2]. Untreated hepatitis B and C viral infections can lead to life treating long-term complications such as liver cirrhosis and cancer. Women of childbearing age can potentially transmit HBV to their babies. They transmit an infection to newborn usually during birth or soon after birth following close contact. Newborns that exposed to HBV will have almost 85–90% risk of developing chronic liver diseases [3].

Hepatitis is becoming an emerging public health concern in Ethiopia. Recent systematic review of all types of viral hepatitis in Ethiopia concluded that the prevalence of HBV among the population is 7.4%. Several HBV epidemiological studies among pregnant women are available in Ethiopia. However, the results of these studies showed a wide variation of prevalence ranging from 2.3 to 7.8% over time and across geographical areas [4]. Despite the availability of results from each study, there are no nationwide data on the prevalence of HBV infection among pregnant women in Ethiopia which clearly shows the presence of research gaps [5].

Objectives of the study

The main objective of the study is to find the Knowledge and awareness of Hepatitis B virus infection among pregnant women of Pakistan.

MATERIAL AND METHODS:

This study was conducted at Bahawal Victoria hospital, Bahawalpur during Dec 2017 to May 2018. The group of participants comprised both genders and inclusion criteria required participants to be 18 years of age and provide signed, informed consent. A sample size of 100 individuals for each location was targeted. Assuming a response rate of 75–80%, 75 completed questionnaires would yield a power of 80% with a 5% type 1 error rate to detect a 16% difference when comparing dichotomous variables between two groups of equal size.

Data collection

A specific questionnaire was developed to determine viral hepatitis perception. This instrument was composed of two topics: demographic characteristics and viral hepatitis perception. Sociodemographic data included gender, age, education, and monthly family income.

Statistical analysis

Student's t-test was performed to evaluate the differences in roughness between group P and S. Two-way ANOVA was performed to study the contributions. A chi-square test was used to examine the difference in the distribution of the fracture modes (SPSS 19.0 for Windows, SPSS Inc., USA).

RESULTS AND DISCUSSION:

Independent factors associated with insufficient reduced HBV knowledge include women outside the healthcare sector, lower education level, and no previous HBV testing. The majority of respondents could provide correct responses about the common aspects of HBV infection, including screening, blood-borne and perinatal transmissions, prevention by vaccination, and sequelae of HBV infection. The mean knowledge score was 6.73 ± 3.04 (mean \pm SD) and the median was 7.0. Only 21.0% of participants were able to answer all the general knowledge questions correctly, including 43.3% who knew that infection with HBV could be asymptomatic.

Table 01: Responses to HBV knowledge questions, stratified by hospital.

items	Missing	Total correct answers, n (%)	Correct answers, n (%)			P
			SYSU	Panyu	Foshan	
Q1: Hepatitis B is caused by a virus	7 (0.9)	413 (56.6)	243 (53.4)	104 (68.4)	66 (53.7)	0.004
Q2: Hepatitis B can be transmitted through blood transfusion	2 (0.3)	548 (74.6)	331 (72.0)	127 (83.6)	90 (73.2)	0.016
Q3: Hepatitis B can be transmitted through unprotected sexual intercourse	4 (0.5)	342 (46.7)	224 (48.9)	68 (44.7)	50 (40.7)	0.23
Q4: Hepatitis B can be transmitted from mother to fetus	11 (1.5)	585 (80.6)	342 (75.8)	139 (91.4)	104 (84.6)	<0.001
Q5: Hepatitis B can be transmitted through use of unsafe needles or sharps	6 (0.8)	520 (71.1)	303 (66.4)	122 (80.3)	95 (77.2)	0.001
Q6: An individual can be infected by both Hepatitis B and HIV	9 (1.2)	290 (39.8)	196 (43.3)	53 (34.9)	41 (33.3)	0.051
Q7: Hepatitis B infection can lead to liver cancer	4 (0.5)	421 (57.4)	231 (50.4)	108 (71.1)	82 (66.7)	<0.001
Q8: Hepatitis B infection can lead to cirrhosis (scarred liver)	6 (0.8)	430 (58.8)	239 (52.4)	105 (69.1)	86 (69.9)	<0.001
Q9: A person can be infected with hepatitis B and not have any symptoms of the disease	9 (1.2)	315 (43.3)	175 (38.6)	89 (58.6)	51 (41.5)	<0.001
Q10: There is a vaccine for hepatitis B	13 (1.8)	541 (74.7)	294 (65.5)	143 (94.1)	104 (84.6)	<0.001

Hepatitis B virus exists in eight different genotypes (A-H) and its prevalence differs with differs by geography and ethnicity. Ten different studies conducted at different regions of Pakistan showed that the most prevalent HBV genotype in Pakistan is genotype D with overall prevalence rate of 63.71% followed by genotype A (10.036%), genotype C (7.55%) and genotype B (5.335%) while un typable and mixed genotypes were 2.377% and 9.931%, respectively [7].

The lack of knowledge is one explanation why only 16.5% of participants expressed willingness to take antiviral agents that are safe in pregnancy to prevent MTCT of HBV. This result is consistent with another survey conducted in China in 2011 that found 11.7% of obstetrics and gynecology staff thought antiviral therapy was important during pregnancy [8]. These data are also consistent with a recent prospective study at SYSU of telbivudine treatment during pregnancy to prevent HBV MTCT where only 29.9% of pregnant women with high HBV DNA levels voluntarily accepted antiviral therapy [9]. In order to increase the willingness of women to take antivirals during pregnancy, further work is needed to educate women about both the long-term consequences of HBV infection in an infant and about prevention of MTCT of HBV [10].

CONCLUSION:

It is concluded that pregnant women of Pakistan had insufficient knowledge regarding HBV infection. Despite most respondents being aware of the importance of antenatal screening, neonatal vaccination and postnatal follow-up of HBV, very few were willing to receive antiviral therapy to prevent MTCT of HBV. This deficiency in knowledge and attitudes was most prominent in less educated women.

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