HBsAg Frequency in Porters Applying to Public Health Laboratory

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Abstract

Hepatitis B virus infections are one of the major health problems of the world. Mainly parenterally transmitted HBV can be found in blood but less frequently in body fluids such as saliva, semen, sweat, and tears, and transmission may occur percutaneously. For this reason, it is important to investigate HBsAg in carrier screenings for public health. In this study, HBsAg frequency microparticle ELISA (Vitros 3600, Ortho-Clinical Diagnostics) in serum samples taken to the Ministry of Health Afyonkarahisar Public Health Laboratory for porter screening of sector employees such as food, cleaning and tourism between September 2011 and March 2012. It was researched by method. Samples with a positive reaction were verified by running the same kit a second time. Results and data were evaluated retrospectively. A total of 1961 porteurs, 311 (15.8%) women, aged between 18-65, were included in the study, 1096 of the porter was food (56.0%), 312 was tourism It was determined that he worked in the cleaning (4.0%) sector and 470 (24.0%) of them were new recruits. HBsAg positivity was found in 39 (1.9%) carriers, five of whom were women. It was determined that 32 (82.0%) of the HBsAg positive porter were working in the food sector, 4 (10.3%) were working in the cleaning sector, and 3 (7.7%) were new recruits. Most epidemiological studies on hepatitis B in our country show that intra-family or intra-community horizontal transmission of HBV in childhood and adolescence is at the forefront. In addition to parenteral applications, body fluids such as saliva, sweat and tears are also prominent in community horizontal transmission. For this reason, it is important to check HBsAg in carrier screenings in terms of public health. (Journal of Viral Hepatitis 2012; 18 (1): 57-9)

Keywords: *HBsAg, Porter, Seroprevalence.*

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A. INTRODUCTION

Hepatitis B virus (HBV) infection, which is common all over the world, is a global public health problem with approximately 378 million carriers (Franco et al., 2012). There are about 3-5 million HBsAg carriers in Turkey (Duman et al., 2009). The clinical importance of HBV is due to its cause both acute fatal infections and its association with chronic diseases (chronic hepatitis, liver cirrhosis and liver cancer).

According to the HBV carrier rate, the world is divided into high, medium and low endemicity regions. Accordingly, the Middle East, some eastern European countries and the Mediterranean basin are considered to be middle endemic areas with a rate of 2-8% (Franco et al., 2012). Although HBsAg seropositivity shows regional differences in our country, it is 3.4% in western regions and 8.0% in Eastern and Southeastern Anatolia (Mehmet et al., 2005).

Hepatitis B virus is mainly transmitted parenterally. In addition, it can be transmitted percutaneously (any situation in which skin integrity is impaired) or by contact of infectious blood and body fluids (such as semen, saliva) to the mucosa. Sex with infected partner, injector-drug preparation equipment, etc. The use of IV

drugs in which materials such as shared are shared, birth from an infected mother, contact with the blood or open wound of the infected person, exposure to HBV with a needle stick or stab injury, or with the infected person's razor, razor, nail scissors, toothbrush. It can also be transmitted by sharing materials that may come into contact (Aşılaması, 2009).

Infectious HBV is found in high concentrations in blood and serum. However, other body fluids such as semen and saliva are also infectious (Aşılaması, 2009). HBsAg positive individuals as well as individuals with chronic HBV infection are potentially infectious. Because HBV maintains its vitality on surfaces at room temperature for at least 7 days and contamination occurs through contact with contaminated surfaces (Shepard, 2006).

In this study, it was aimed to investigate the frequency of HBsAg in serum samples taken from those who applied to Afyonkarahisar Public Health Laboratory for porter screening.

B. METHOD

Carriers working in sectors such as food, cleaning, tourism and new recruits who applied to the Ministry of Health Afyonkarahisar Public Health Laboratory for routine porter screening between September 2011 and March 2012 were included in this study. HBsAg was investigated in serum samples taken from the porters by microparticle ELISA (Vitros 3600, Ortho-Clinical Diagnostics) method. Samples with a positive reaction were verified by running the same kit a second time.

C. RESULT AND DISCUSSION

A total of 1961 porteurs, 311 (15.8%) women, aged between 18-65, were included in the study. It was determined that 1096 of the porters (56.0%) were working in the food sector, 312 (16.0%) in tourism, 83 (4.0%) in the cleaning sector and 470 (24.0%) were new recruits. HBsAg seropositivity was detected in 39 (1.9%) carriers, (Shepard et al., 2006) of whom were women. It was determined that 32 (82.0%) of HBsAg seropositive porters were working in the food sector, (Aşılaması, 2009) (10.3%) were working in the cleaning sector, and 3 (7.7%) were new recruits (Table 1).

Table 1. Distribution of HBsAg Positive Carriers by Occupational Groups and Gender

	HBsAg positive Woman	HBsAg positive Man	Total
Food (n=1096)	4	28	32
New Entry (n=470)	-	3	3
Tourism (n=312)	-	-	-
Cleanliness (n=83)	1	3	4
Total (n=1961)	5	34	39

Laboratory examinations within the scope of porter examination are performed in Public Health Laboratories. In addition to the laboratory examinations within the scope of porter examination, HBV screening is also performed for those who work in the tourism, cleaning sectors, especially those working in the food sector, and those who are newly recruited to work in these sectors. For this purpose, HBsAg positivity is investigated in carriers.

The global epidemiology of HBV infection is divided into 3 categories according to the proportion of population seropositive for HBsAg: high, moderate and low endemicity (Custer et al., 2004). Our country is in the middle endemicity region (2-8%) in terms of HBsAg seropositivity. Although HBsAg seropositivity shows regional differences in our country, it is on average 3.4% in western regions and 8.0% in Eastern and Southeastern Anatolia (Mehmet et al., 2005). Gurol et al (2006) reported HBV seropositivity as 4.1% in a study they conducted on blood donors between 1989-2004.

In various studies investigating the HBsAg seroprevalence in our city located in the western region of our country, the seropositivity rate was found to be between 1.3-8.7%. Altındiş et al. (2001; 2006, 2011) in our city's healthy blood donors 1999-2000; In their studies between 2001-2005 and 2001-2010, they found the frequency of HBsAg to be 8.7%, 1.9% and 1.3%, respectively. Yılmazer et al. (2004) found the frequency of HBsAg to be 2.9% in a study they conducted between 2000 and 2003 in healthy pregnant women in our city. Demirtürk et al. (2006) found the HBsAg prevalence to be 6.6% in healthy individuals who came to our city university hospital for routine health check-ups between 2002 and 2004. In our study, HBsAg seropositivity was found to be 1.9%, in accordance with the data of studies conducted in various healthy groups in our city.

Göz et al. (1994) found HBsAg seropositivity to be 6.7% in the porter scan they conducted in an employee of a food factory in Ankara in 1994. On the other hand, Cengiz et al. (1998) found that HBsAg seropositivity was 3.8% in a study they conducted in 1998 on a staff working in a canteen of a bank. Decrease in HBsAg seropositivity over time. It can be attributed to the routine practice in groups, taking protective measures.

D. CONCLUSION

As a result, it is seen that HBsAg positivity has decreased in recent years, and is similar to our study, in our region as well as in our country. This result can be explained by the implementation of protection measures in HBV.

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