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EDITORIAL

We Have More Data Regarding Epidemiology of Hepatitis D in Iran but There are Defects to be Filled Yet!

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Hepatitis D virus (HDV) infection occurs worldwide but incidence and prevalence data are limited in many parts of the world due to inaccurate reporting and delayed detection [1]. The epidemiology of HDV infection is similar to hepatitis B virus (HBV) but with notable exceptions. Epidemiologic studies of HDV show that it is present in many different countries. It is estimated that approximately 5% of hepatitis B surface antigen (HBsAg) carriers are infected with HDV infection worldwide [2]. The infection was endemic in the Mediterranean basin, the Middle East, and parts of Africa [1, 3-5]. However, the rate of HDV infection has decreased in Iran due to the introduction of HBV vaccination, the subsequent decrease in HBV infection and thus in the pool of HBsAg carriers who may be infected with HDV. Socio-economic improvements and measures introduced to control the human immunodeficiency virus (HIV) are also responsible for this decrease. Nonetheless, it continues to represent a public health problem in some parts of the world yet [6-9].

Although the decrease in the prevalence of HDV infection in Iran could be attributed to changes in the epidemiology of hepatitis B [10], enough evidence and data is not available to prove it. HDV is endemic in Iran but has received little attention. There is insufficient data to formally compare HDV infection rates in Iranian populations in different cities before. Fortunately, scientists have recently done epidemiological studies for determining the prevalence of HDV infection in different cities.

HDV has a widespread geographic distribution with two predominant patterns of transmission. In endemic areas, such as Southern Italy, parts of Africa and South America, transmission is thought to occur through person-to-person contacts in the absence of overt percutaneous exposure. In contrast, in Western Europe and the United States, HDV infection has been confirmed to groups with frequent percutaneous exposure. There is little data available regarding the routes of HDV transmission in Iran. The predominant routes for the transmission of HBV in Iran were maternal, from infected mothers to infants and horizontal during childhood [11]. The epidemiology of hepatitis B has changed in Iran and horizontal transmission in adults is increasing [10]. The risk factors for acquiring HDV infection in some studies in Iran are blood transfusion, surgery, family history, Hejamat (traditional phlebotomy) ,tattooing, war injury, dentistry interventions and endoscopy [12, 13].

There are data from different parts of the country reporting different prevalence rates. In a study by Malekzadeh *et al* (1989) in asymptomatic hepatitis B carriers in Shiraz (South of Iran), 13.9% were positive for anti-HDV Ab [14]. This was the first report on the epidemiology of HDV infection from Iran. In a new study by Taghavi *et al* (2008) [15] in Shiraz in chronic hepatitis B patients over the age of 15, anti-HDV Ab positivity rate is 9.7% which shows a decrease in its prevalence. Amini *et al* (1989) in Hamadan (midwest of Iran) reported that 2.4% of HBsAg carriers were positive for anti-

HDV Ab in Hamadan (midwest of Iran) which shows a low prevalence of HDV infection. Positive HDV cases were mainly children and young adults (<20 years of age), suggesting that the superinfection or co-infection with HDV occurred in childhood or early adolescence [16]. Rezvan *et al* (1986-1988) in a study in Tehran reported that 2.4% of HBsAg positive blood donors and 44.5% of hemodialysis patients with HBsAg had anti-HDV Ab [17]. Karimi *et al* (2000) reported that 1.3% of HBsAg positive blood donors and 25.2% of hemodialysis patients with HBsAg were positive for anti-HDV Ab in Tehran [18]. Alavian *et al* (2004) reported that 5.7% of chronic hepatitis B patients in Tehran (Capital of Iran) were anti-HDV positive. History of transfusion, surgical history, tattooing, war injury, dentistry interventions and endoscopy were common in HDV infection and were the risk factors [12]. Roshandel *et al* (2007) reported that 5.8% of HBsAg positive individuals had anti-HDV Ab in Golestan [19-21]. Hasanjani Roushan *et al* (2002) reported that 2% of chronic hepatitis B patients were anti-HDV Ab positive in Babol (North of Iran) [22] while Zahedi *et al* (2003) reported that 20.7% of chronic hepatitis B patients were anti-HDV Ab positive in Kerman (South of Iran) [23]. Torabi *et al* (2000) reported a prevalence rate of 6.15% for anti-HDV Ab positivity in chronic hepatitis B patients in Tabriz (Northwest of Iran) [24]. Vaziri *et al* (2006-2007) found a prevalence rate of 31.57% for Anti-HDV positivity in HIV patients co-infected with HBV in Kermanshah (West of Iran) [25].

In conclusion, HDV infection is a widespread disease that has affected a large number of HBV infected population in Iran and is considered to be a major public health problem in our country. Hemodialysis patients are at high risk for acquiring the infection and should be aware of prevention strategies for controlling hepatitis D in HBsAg positive patients [26]. Heterogeneous patterns of geographic distribution of HDV infection throughout the country indicate that the risk factors of HDV infection may differ in different regions of the country and that comprehensive surveys in HBV infected patients should be conducted in the country to investigate the risk factors and the prevalence rate of infection.

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