EDITORIAL

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Hepatitis D Is a Forgotten Problem in Hemodialysis Patients in the World

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Hepatitis Delta Virus (HDV) is a small defective virus that replicates only in the presence of Hepatitis B surface Antigen (HBsAg) [1]. The epidemiology of HDV infection is similar to HBV but with notable exceptions. Evidence of HDV infection was found all around the world. It is estimated that approximately 5% of HBsAg carriers are infected with HDV infection all around the world. HDV infection occurs worldwide but incidence and prevalence data are limited due to inaccurate reporting and delayed detection. It is more difficult to determine the number of cases of acute or fulminant hepatitis related to HDV infection, as the incidence varies among continents, countries, and regions.

In general, three epidemiological patterns of HDV infection can be identified. They include the endemic pattern (such as what occurs in southern Italy and Greece), the epidemic pattern (epidemics have been reported in the Amazon Basin of Venezuela), and the occurrence of HDV infection among high-risk groups such as intravenous drug users (in developed Western countries). The epidemiology of HDV infection seems to be changing in some regions. Vaccination against HBV, decrease in HBV infection and thus in the pool of HBsAg carriers who may be infected with HDV are responsible for this decrease. Immigration patterns can be expected to have an impact on HDV infection. Nonetheless, it continues to represent a public health problem in some parts of the world yet [2-5].

HBV infection in dialysis patients varies among different localities and correlates with the endemicity in the general population of the region. HBV prevalence has decreased in many countries in general population and dialysis patients. Improvement of people's knowledge about risk factors, national vaccination programs for neonates and vaccination of high risk groups are responsible for these decrease in prevalence of HBV infection in general population [6]. The overall incidence and prevalence of HBV infection in dialysis patients has decreased over the years as a result of routine screening of blood products for HBsAg, the advent of recombinant human erythropoietin, HBV vaccination and the implementation of infection control measures [7, 8]. However, the prevalence and incidence rates of HBsAg positivity are still high among patients undergoing maintenance hemodialysis in the less developed countries [9].

Transmission of HDV is similar to HBV, via blood and blood fluids containing the virus, and infection occurs by parenteral routs [10]. Dialysis patients may acquire HDV infection as they are at risk of hepatitis B infection. The information on the epidemiology of HDV infection in the dialysis patients is limited. This may be in part related to limited use or availability of delta testing. In European countries, such as France, Sweden, and the USA, HDV infection is restricted to high risk group of drug addicts and has decreased during recent years [11]. There are some reports of acute and fulminant hepatitis or symptom-free transmission in dialysis patients with HBV and HDV infections [12-14]. The prevalence was different from zero to 44.5% in

hemodialysis patients [15, 16]. The prevalence of HDV in different groups is related to routs of transmission. In Iran, the main route for HBV transmission was vertical in past [6, 17] and the difference between the prevalence of HDV infection in hemodialysis patients (44.5%) and asymptomatic carriers (2.5%) is meaningful [15].

Delta virus is of particular potential concern in hemodialysis units where segregation of HBsAg positive patients to minimize hepatitis B transmission to susceptible patients may facilitate the transmission of delta agent [18]. HDV infection is not important in developed countries, but may be a major risk for fulminant hepatitis in hemodialysis patients with HBV infection in developing countries. The importance of HDV is rising due to immigration phenomenon from area of developing countries. I recommend periodic testing for HDV infection by anti-HDV antibody in HBsAg positive carriers on chronic hemodialysis treatment.

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