The Prevalence of Hepatitis B Virus Infection in a Population on Long-Term Hemodialysis

Gioacchino Li Cavoli Onofrio Schillaci Carmela Zagarrigo Tancredi Vincenzo Li Cavoli
Barbara Oliva Angelo Tralongo Franca Servillo Flavia Caputo

Nephrology Dialysis with Renal Transplant, Civico and Di Cristina Hospital, Palermo, Italy

Dear Editor,

Although the prevalence and incidence rates among hemodialysis (HD) patients in developed countries have declined over the last 3 decades, Hepatitis B virus (HBV) infection remains a major issue in the HD setting [1]. The isolated finding of HBcAb in HBsAg-negative subjects is considered an indication of past exposure to HBV and resolved infection, but the use of sensitive techniques to detect HBV-DNA has shown that low levels of viremia are detectable in HBsAg-negative/HBcAb-positive subjects. Today, vaccination programs offer the promise of eliminating HBV infection from developed areas, but emigration from countries of the world where HBV is highly prevalent will result in HBsAg-negative patients with past exposure to HBV, with the likelihood of them developing ESRD and entering the dialysis pool. We investigated the prevalence of HBV infection in HD patients by analyzing the HBV serological markers of 322 HD patients from January 2016 to June 2017 in Palermo Italy. Among the 322 screened patients, we found 6 were HBsAg-positive (1.8%); among these patients, 2 had coin-

fection with HCV and 1 with HIV; 2 patients were migrant from Africa; all HBsAg-positive patients had history of transfusion but not of illicit drugs abuse. Among the remaining 316 HBsAg-negative patients, we found that 56 were HBcAb-positive (18%) and 59 were HBsAb-positive (19%) patients; 32 patients (10%) had mixed HbsAb/HBcAb-positivity; no positive case of IgM-HBcAb-, HBeAg-, or HBeAb-positive was detected; 311 patients were Caucasian; 3 patients had migrated from Africa and 2 patients had migrated from Bangladesh. All serological markers of the HBsAg-negative patients are summarized in Table 1. Despite the decline of HBV infection worldwide in the general population, the most recent reports show a persistent presence of HBV in HD setting. Data from Regional Italian Registries on HBsAg-positivity in HD patients range from 0.6 to 2.2% [2]. In the general population, HBcAb is a long-life serological marker of previous HBV infection and it is found in persons with chronic infection as well as in those who recover from infection. In Italy, the prevalence of HBsAg-

Table 1. Serological HBV-HCV-HIV markers in 316 Sicilian HBsAg-negative hemodialysis patients

Markers	Number of patients, %
HBsAb/HBcAb-negative	201 (63)
Total HBsAb-positive	59 (19)
Total HBcAb-positive	56 (18)
Isolated HBcAb positive	24 (8)
Mixed HBcAb-positive/ HbsAb-positive	32 (10)
Total HCVAb-positive	23 (7)
Mixed HCVAb-positive/ HBcAb-positive	11 (3)
HIVAb-positive	3 (0.9)

negative/HBcAb-positive subjects among first-time blood donors ranges from 4.85 to 8.3% [3–4]. In clinical practice, the presence of HBcAb in HBsAg-negative/HBsAb-negative subjects is considered an important key for occult HBV infection

tracking in the general population, in HD patients and in renal transplant recipients [5]. The relevant HBcAb-positivity rate in HD patients highlights the existing prevalence of risk of HBV spread in HD facilities.

Ethics Statement

The authors state that subjects gave their informed consent and that the study protocol was approved by the institute's committee on human research.

Disclosure Statement

The authors declare that no conflicts of interest exist.

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