

Frequency of Hepatitis D Virus Infection in HIV Positive and Hemodialysis Patients

*Aghasadeghi MR, Mohraz M, Bahramali G, Aghakhani A, Banifazl M, Foroughi M, Ahmadi F, Eslamifar A, and Ramezani A**

*amitisramezani@hotmail.com

ABSTRACT

Background and objective: Hepatitis D virus (HDV) is a defective virus dependent on hepatitis B virus (HBV) for its replication. Due to HDV transmission routes, hemodialysis (HD) and HIV infected patients are at risk of acquiring HDV. This study was aimed to determine the frequency of HDV infection among HIV positive and HD patients in Tehran, Iran.

Materials and methods: A total of 720 cases including 120 HD and 600 HIV-infected patients were enrolled in this study. All HBsAg positive cases were evaluated for the presence of anti-HDV antibodies. Anti-HDV positive samples were subjected to nested PCR for HDV-RNA confirmation and sequenced for HDV genotype determination.

Results: Out of 120 HD patients, 9 (7.5%) and out of 600 HIV-infected patients 9(1.5%) were HBsAg positive. 3 (33.3%) of HBsAg positive HD samples and 5 (55.5%) of HBsAg positive HIV infected cases, were anti-HDV positive. The amplification results confirmed 3 (37.5%) samples to be HDV-RNA positive. Overall 2.5% of HD patients and 0.83% of HIV infected cases were anti-HDV positive and 1.66% and 0.16% of HD and HIV infected patients were positive for HDV-RNA respectively. All of the HDV isolates were clustered in clade 1.

Conclusion: Our survey showed, although overall HDV frequency might not be high in the cases, an increase in HDV occurrence in our cohort of high risk patients were seen.

Key words: Hepatitis D virus (HDV); Human Immunodeficiency Virus (HIV); Hemodialysis