

Hepatitis E Virus Infection Among Chronic Hemodialysis

Shokouh Shayanpour^{1,*} and Fatemeh Hayati¹

¹Department of Internal Medicine, Chronic Renal Failure Research Center, Ahvaz Jundishapur University of Medical Sciences, Ahvaz, IR Iran

*Corresponding author: Shokouh Shayanpour, Department of Internal Medicine, Chronic Renal Failure Research Center, Ahvaz Jundishapur University of Medical Sciences, Ahvaz, IR Iran. Tel: +98-9163114638, E-mail: Dr.shayanpour@yahoo.com

Received 2015 January 12; Revised 2015 November 3; Accepted 2016 January 4.

Keywords: Hepatitis E Virus, Chronic, Hemodialysis

Dear Editor,

Recently, we read with great interest the article by Beladi Mousavi et al. (1) entitled "epidemiology of hepatitis E virus infection in patients on chronic hemodialysis" you published in your most valuable journal. The author evaluated the prevalence of anti-HEV IgG antibody among chronic hemodialysis (HD) patients in Imam Khomeini hospital, Ahvaz city, in southwest Iran. The results of this study showed that the prevalence of anti-HEV IgG antibody among these patients is 10.63% without any significant difference due to HEV, age, gender and duration of HD or HCV antibody titer (1). The results of the study are interesting. According to the article, HEV infection is endemic in Khuzestan province, Iran (1). We think that the results of the study are limited by the small number of patients (47 HD patients) enrolled in the study. A multicenter evaluation with a large number of patients is needed for a better estimation of the prevalence of HEV infection among dialysis patients. End stage renal disease (ESRD) is a life-threatening disease with significant complications found in people around the world.

In contrast to hepatitis B and C, which are associated with significant mortality among these patients, hepatitis E had been believed to be a self-limited acute infection with spontaneous recovery in almost all cases and without any association with chronic hepatitis (2-7). However, some recent studies have reported several cases of persistent HEV-related chronic hepatitis and its relatively rapid evolution to HEV-related cirrhosis, especially among immunosuppressive patients, including organ transplant recipients (8, 9). For example, Kamar et al. (10) evaluated 241 renal allograft recipients and demonstrated that HEV infection could develop into a chronic active hepatitis in nearly 60% of renal transplant patients who had HEV infection. In addition, although transmission of HEV primarily occurs by the fecal-oral route, some studies have indicated that other modes of transmission such as

mother-to-child, parenteral routes, transfusion and HD could potentially play a role in the transmission of HEV. It has also been suggested that the fecal-oral route may also be a pathway for HEV transmission in HD centers (8-10). Due to the possibility of HEV transmission in HD centers and the possibility of persistent HEV-related chronic hepatitis and HEV-related cirrhosis, we agree with Beladi Mousavi et al. on the periodic monitoring of HD patients. In this case, careful observation is needed for the diagnosis of HEV infection, especially among ESRD patients who are candidates for kidney transplantation.

Acknowledgments

The authors wish to thank the staff and ESRD patients in HD center of Imam Hospital in the province of Khuzestan, Ahvaz, Iran for help us in this work.

Footnote

Funding/Support:Chronic renal failure research center, Ahvaz Jundishapur University of Medical Sciences, Ahvaz, Iran.

References

1. Beladi Mousavi SS, Motemednia F, Beladi Mousavi M. Epidemiology of hepatitis e virus infection in patients on chronic hemodialysis. *Jundishapur J Microbiol.* 2014;7(5):e6993. doi: 10.5812/jjm.6993. [PubMed: 25147715]
2. Beladi Mousavi SS, Sametzadeh M, Hayati F, Fatemi SM. Evaluation of acquired cystic kidney disease in patients on hemodialysis with ultrasonography. *Iran J Kidney Dis.* 2010;4(3):223-6. [PubMed: 20622311]
3. Beladi-Mousavi SS, Alemzadeh-Ansari MJ, Alemzadeh-Ansari MH, Beladi-Mousavi M. Long-term survival of patients with end-stage renal disease on maintenance hemodialysis: a multicenter study in Iran. *Iran J Kidney Dis.* 2012;6(6):452-6. [PubMed: 23146984]
4. Beladi-Mousavi SS, Beladi-Mousavi M, Hayati F, Talebzadeh M. Effect of intranasal DDAVP in prevention of hypotension during hemodialysis. *Nefrologia.* 2012;32(1):89-93. doi: 10.3265/Nefrologia.pre2011.Nov.10967. [PubMed: 22294007]

5. DaRoza G, Loewen A, Djurdjev O, Love J, Kempston C, Burnett S, et al. Stage of chronic kidney disease predicts seroconversion after hepatitis B immunization: earlier is better. *Am J Kidney Dis.* 2003;**42**(6):1184-92. [PubMed: 14655190]
6. Fabrizi F, Martin P, Dixit V, Bunnapradist S, Dulai G. Meta-analysis: Effect of hepatitis C virus infection on mortality in dialysis. *Aliment Pharmacol Ther.* 2004;**20**(11-12):1271-7. doi: 10.1111/j.1365-2036.2004.02290.x. [PubMed: 15606388]
7. Feily A, Dormanesh B, Ghorbani AR, Moosavi Z, Kouchak M, Cheraghian B, et al. Efficacy of topical cromolyn sodium 4% on pruritus in uremic nephrogenic patients: a randomized double-blind study in 60 patients. *Int J Clin Pharmacol Ther.* 2012;**50**(7):510-3. [PubMed: 22732382]
8. Rostami Z, Einollahi B, Lessan-Pezeshki M, Soleimani Najaf Abadi A, Mohammadi Kebar S, Shahbazian H, et al. Health-related quality of life in hemodialysis patients: an Iranian multi-center study. *Nephrourol Mon.* 2013;**5**(4):901-12. doi: 10.5812/numonthly.12485. [PubMed: 24350090]
9. Nemati E, Motalebi M. A Better Quality of Life in Hemodialysis Patients With Viral Hepatitis: Is it a Reality? *Hepat Mon.* 2013;**13**(11):e15525. doi: 10.5812/hepatmon.15525. [PubMed: 24348649]
10. Kamar N, Selves J, Mansuy JM, Ouezzani L, Peron JM, Guitard J, et al. Hepatitis E virus and chronic hepatitis in organ-transplant recipients. *N Engl J Med.* 2008;**358**(8):811-7. doi: 10.1056/NEJMoa0706992. [PubMed: 18287603]