

Hepatitis C among Hemodialysis Patients: Impact of Strict Adherence to Universal Precautions

Eghlim Nemati *, Saeed Taheri, Behzad Einollahi

Nephrology & Urology Research Center (NURC), Baqiyatallah University of Medical Sciences, Tehran, Iran

Dear Sir;

We greatly enjoyed reading the excellent review article by Alavian and colleagues ⁽¹⁾ on hepatitis C virus (HCV) infection in hemodialysis (HD) patients. HCV is a demonstrated risk factor for outcome in HD patients; however, the mechanisms responsible for transmission of hepatitis C virus in HD units remained obscure. Partial immunosuppression found in these patients, resulting in a poor antibody response has been suggested to play a major role in sensitizing them to achieve the infection through uncommon ways.

Most of our knowledge in the issue comes from studies evaluating the protective impact of different protocols on the incidence of HCV infection in HD units. Suggested risk factors associated with HCV dissemination in HD centers include: transmission through blood transfusions, dialysis machines, surgery, shared equipment, devices, multi-dose drugs and nosocomial route ⁽²⁾. On the other hand, while several studies have doubted the potential roles of the above mentioned factors in transmission of HCV in HD units; others suggested no roles for blood transfusions and dialysis machines in the acquisition of HCV infection by HD patients ⁽³⁾. At the present time, the Center for Disease Control and Prevention (CDC, Atlanta, Georgia, USA) does not recommend isolation of patients with HCV ⁽⁴⁾.

More recent studies emphasize on the role of nosocomial route as the main way of infection spread in dialysis patients. Percutaneous procedures, sharing of dialysis equipment (scissors, clamps and other non-disposable items), and failure to implement elementary hygienic measures are of proposed routes of HCV transmission from patient to patient. On the other hand, the single main impact of strict application of universal precautions in dialysis units for prevention of HCV transmission

has been intensively highlighted ⁽⁵⁾. Changing gloves after each patient manipulation, avoiding touching surfaces with gloved hands, preparing medications from a centralized area, separating "clean and contaminated" area, avoiding sharing of articles among patients, avoiding clutter and allocating enough space between dialysis beds to prevent virus dissemination, and cleaning and disinfecting the environmental surfaces including dialysis bed/chair and machines after each dialysis session are proposed endeavors to prevent nosocomial dissemination of HCV infection.

According to the reviewed studies discussed in Alavian *et al.* article ⁽¹⁾, Iranian HD units have a relatively high prevalence of HCV infection. However, adhering to the universal hygienic precautions has led to a low prevalence of 5% HCV infection in our HD population in Baqiyatallah Hospital. More amazingly, evaluating all our HD patients for serum anti-HCV antibody biannually simultaneous with PCR analysis for any suspected cases, in fact, we had no incident case of HCV infection in our HD center through its activity time (8 years) and all our HCV cases were infected before admission to our center.

* Correspondence:

Eghlim Nemati, M.D., Nephrology & Urology Research Center (NURC), Baqiyatallah University of Medical Sciences, Mollasadra Avenue, Vanak Square, Tehran, Iran.

Tel: +98 21 81264154

Fax: +98 21 81264157

E-mail: nemati203@gmail.com

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