



# Clinical Digest

ONLINE EDITION

## INFECTIOUS DISEASES

### Is There a Link Between Hepatitis C and Kidney Disease?

The association of hepatitis C virus (HCV) with chronic kidney disease (CKD) is controversial, due, in part, to conflicting research findings. Although HCV transmission in dialysis units has been well documented, a high number of patients new to dialysis already have HCV, suggesting that the virus often is acquired before initiating dialysis therapy. To help clarify the issue, researchers from the University of Pittsburgh, the VA Pittsburgh Healthcare System, and the Center for Health Equity Research and Promotion, all in Pittsburgh, Pennsylvania, evaluated data from the Electronically Retrieved Cohort of HCV-Infected Veterans on 43,139 veterans with and without HCV infection.

Of the total veterans, 18,002 were determined to have HCV infection based on either positive antibody test result or positive result for HCV RNA

testing. HCV-infected and HCV-uninfected patients were followed up through their last encounter in the VHA, death, or development of CKD stages 3 to 5. CKD was defined as 2 estimated glomerular filtration rate (eGFR) values  $< 60 \text{ mL/min/1.73 m}^2$ , determined at least 90 days apart—consistent with the National Kidney Foundation's definition of CKD stages 3 to 5.

Overall, 3,140 participants (17.4%) in the HCV-infected group and 3,738 (14.9%) in the HCV-uninfected group developed CKD stages 3 to 5. Researchers found HCV infection was associated with a higher risk of, and a shorter time to, developing CKD, even though HCV-infected individuals had, on average, a higher baseline eGFR.

Risk factors for CKD (including diabetes, hypertension, and dyslipidemia) were less prevalent in HCV-infected individuals, compared with controls, “emphasizing the importance of the HCV itself or other unknown factors on the progression of CKD,” the researchers say. Although

it has been shown that controlling diabetes and hypertension can slow kidney disease, aggressive management of dyslipidemia has not been associated with improvement in clinical renal outcomes.

In their study, dyslipidemia was associated with a higher risk of CKD in the univariate model, but the relationship was not significant in the multivariate model, suggesting that the risk was mediated by other factors. Their finding of a lower prevalence of diabetes also is in contrast to conventional wisdom, but they say it is consistent with findings in another of their studies, which found a lower prevalence of diabetes in HCV-infected patients on dialysis.

The VA has a national screening program for HCV, but only approximately 11% of veterans overall are treated for HCV infection, the researchers say. They advise closely monitoring HCV-infected patients for the development and progression of CKD. ●

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