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Re: Renal Involvement in Patients With Hepatitis C Virus Infection

To the editor,

I read the article entitled "Renal Involvement in Patients With Hepatitis C Virus Infection" by Saddadi and colleagues, which was published in the *Iranian Journal of Kidney Diseases*.[1] The aim of this study was to appraise kidney involvement in patients with hepatitis C virus (HCV) infection. Patients with diabetes mellitus (DM) were excluded. However, HCV infection has been associated with a greater incidence of DM.[2] Moreover, DM can lead to kidney failure, while it was not looked at in this report. Fabris and colleagues[3] reported a 61-year-old man with HCV infection who developed islet-cell auto-antibodies and insulin-dependent DM. This was the first report, in the early 1990s, to recommend the possibility of an association between HCV infection and DM. In addition, several other reports supported the possibility of a link between HCV infection and development of DM.[4] However, the mechanisms underlying the association between HCV and DM are unclear.

In a retrospective survey on the general population of the United States through the Third National Health and Nutrition Examination Survey, Mehta and associates[5] demonstrated an association between HCV infection and DM. They showed that type 2 DM occurred more frequently in HCV-infected patients older than 40 years compared to those without HCV (adjusted odds ratio, 3.77; 95% confidence interval, 1.8 to 7.87).[5] In addition, other authors have found a higher prevalence of HCV infection among individuals with DM.[6,7] In a case-control study, Mason and coworkers[6] found that 4.2% (25 of 596) of diabetic patients were HCV positive compared with 1.6% (6 of 377) of the control group (P = .02). Furthermore, an elevated prevalence of DM was shown in HCV-infected patients compared with those who had other hepatic diseases.[8]

In addition, HCV infection is a common complication in patients on maintenance hemodialysis and kidney transplant recipients.[9,10] In a multivariable analysis on 196 patients who were on long-term hemodialysis, Saxena and Panhotra showed that hemodialysis patients with DM had higher HCV seroconversion rate per year.[11] Furthermore, diabetic patients had a greater risk of nosocomial HCV transmission than nondiabetic patients on long-term hemodialysis.[11]

In a retrospective study on 2370 Japanese patients who underwent kidney biopsy, anti-HCV antibody was positive in 97 (4.1%).[12] Interestingly, the highest anti-HCV prevalence was found in patients with DM-related glomerulosclerosis (19.5% versus 3.2%; $P < .001$). Deterioration of kidney function was greater in the HCV-positive patients than those without HCV infection. Thus, HCV is more common in patients with type 2 DM-related glomerulosclerosis and can lead to progression of the kidney disease.[12]

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