Hepatitis C Virus Plays No Role in the Pathogenesis of Immunoglobulin A Nephropathy in Liver Cirrhosis

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Dear Sir,

Several studies have demonstrated the presence of IgA nephropathy (IgA-N) in up to 50% of patients with liver cirrhosis [1]. Alcohol-induced cirrhosis has been the most common liver disease associated with IgA-N. However, renal IgA deposits are frequently found in posthepatitic and biliary cirrhosis. Several pathogenetic mechanisms for the renal deposition of IgA have been suggested; impaired clearance of circulating IgA immune complexes by defective Kupffer cells, functional portocaval shunts that allow immune complexes to bypass hepatic degradation, defective biliary transport of IgA and hypocomplementemia. Alcohol abuse, even in the absence of liver disease, has also been suggested.

Viral diseases, such as hepatitis B and cytomegalovirus, have been associated with liver-related and idiopathic IgA-N. The frequent association of hepatitis C virus (HCV) infection with mixed cryoglobulinemia and glomerulonephritis has recently been demonstrated, especially in Italian patients [2]. HCV infection with membranous and membranoproliferative glomerulonephritis are reported in case studies [3, 4]. Moreover, Francisco et al. [5] reported a black American patient with chronic active hepatitis related to HCV in whom IgA-N developed in a renal transplant.

Recently, antibodies to HCV were found to be present in 32-55% of cirrhotic patients from Spain and France, especially in alcoholic and autoimmune cirrhosis [6, 7]. In a Japanese study of patients with alcoholic cirrhosis, 60% had HCV markers, in most of them, both HCV ribonucleic acid and HCV antibodies were present [8].

We, therefore, investigated the relationship between HCV and cirrhotic IgA-N in an autopsy study of 38 cases of liver cirrhosis (24 alcoholic, 6 posthepatitic, 1 biliary and 7 of uncertain etiology). The presence of HCV antibodies was investigated on frozen stored plasma by the quantitative 2nd-generation enzyme immunoassay Abbott HCV EIA. Positive results were confirmed by the 5-antigen 2nd-generation immunoblot assay Chiron RIBA HCV test system. In 27 cases, fresh-frozen renal tissue was investigated for glomerular IgA by immunofluorescence.

Thirteen cases (48.1%) were positive for IgA (8 alcoholic, 2 posthepatitic, 3 of uncertain etiology). Only 2 cases, both posthepatitic cirrhosis without glomerular IgA deposits, were anti-HCV positive.
The study confirms the high prevalence of IgA-N in liver cirrhosis. However, it shows that antibodies to HCV are not prevalent in liver cirrhosis in this patient group. The low number of HCV-positive cases may reflect a lower prevalence of HCV in Switzerland, where the prevalence among blood donors (0.34%) is lower than in Spain (1.5%) [9,10]. On the other hand, due to the possibility of false-positive results in the assays used in the French and Spanish studies, those results need confirmation through other assays.

In any event, our results indicate that HCV does not play any role in the pathogenesis of IgA-N in liver cirrhosis.

References


