

A comparison of hepatitis C virus density heterogeneity in immunocompetent and immunodeficient patients

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To study whether the density distribution of HCV RNA in serum or plasma of chronic HCV immunocompetent patients is different from that of immunocompromised patients, we examined 8 plasma of immunocompetent and 4 sera of immunocompromised chronic HCV patients; 3 with X-linked agammaglobulinemia and 1 with common variable immunodeficiency. These samples were all PCR positive for HCV RNA. We fractionated both sera and plasma by sequential floatation ultracentrifugation using sodium bromide solution for adjusting the density. Three fractions were collected; low density fraction ($q < 1.063$ g/ml), high density fraction (q 1.063–1.21 g/ml) and pellet ($q > 1.21$ g/ml). The HCV RNA titer in plasma or sera before fractionation and that in each fraction were determined quantitatively by

competitive RT-PCR. In 8 immunocompetent patients, HCV RNA was found in all fractions, except for 1 patient that it was found only in high density fraction and the other patient in high density fraction and pellet. In comparison of the titers of HCV RNA found in high and low density fractions, 6 patients the titers were higher in high density fractions than that in low density fractions, 1 patient had an equal titer and 1 patient had equal or less titer. In contrast, HCV RNA was determined in all fractions in 4 immunocompromised patients. The titers of HCV RNA were equal in both high and low density fractions. Only 1 patient with agammaglobulinemia showed a higher titer of HCV RNA in low density fraction than that in high density fraction.

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