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Sustained Virological Response after Early Antiviral Treatment of Acute Hepatitis C Virus and HIV Coinfection.

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BACKGROUND: Limited data exist describing the clinical outcome and immunological response primed during simultaneously acquired acute hepatitis C virus (HCV) and human immunodeficiency virus (HIV) coinfection. We present detailed clinical and immunological analysis of 3 individuals after concomitant infection with acute HCV and primary HIV.
METHODS: In addition to longitudinal clinical parameters, virus-specific T cell responses were assessed using Elispot, standard proliferative (carboxyfluorescein diacetate succinimidyl ester), and in vitro CD4(+) T cell assays.
RESULTS: In all patients, anti-HCV treatment was started with pegylated interferon-alpha, and antiretroviral therapy was coadministered early during primary infection. HCV viremia was cleared under therapy with pegylated interferon-alpha in all 3 cases. In 2 patients, HIV replication was contained even after antiretroviral therapy had been interrupted, which was associated with strong HIV-specific CD8(+) and CD4(+) T cell responses. In these 2 patients, multispecific HCV CD4(+) T cell responses could also be detected. No HCV-specific CD4(+) T cell responses were detected in the third patient, who also had the lowest nadir CD4(+) cell count during primary HIV infection (<200 cells/muL).
CONCLUSIONS: Anti-HIV and -HCV therapy should be considered early in cases of concomitant acute HCV and HIV coinfection, because succcessful therapy of HCV viremia seems possible even during primary HIV infection. HCV-specific T cell immunity is generated during primary HIV infection and can be preserved by HCV treatment. However, the optimal treatment algorithm needs to be established in prospective, randomized trials.

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