Hepatitis C Cure After 6 Months of Telaprevir-Based Therapy in an HIV-Infected Man

TO THE EDITOR—This report describes the first case of a person infected with human immunodeficiency virus (HIV) cured of hepatitis C virus (HCV) infection after a shortened course (24 weeks) of therapy with telaprevir, pegylated-interferon, and ribavirin.

A 28-year-old man infected with HIV and HCV acquired through intravenous drug use initiated his second trial of HCV therapy on 19 August 2011. Two years ago, his first HCV treatment with pegylated-interferon and ribavirin was discontinued due to lack of viral response. This time his recommended HCV therapy consisted of telaprevir 2250 mg/day (2 pills every 8 hours) for the first 12 weeks, and pegylated-interferon 180 μg/week (in a single subcutaneous injection) and ribavirin 1000 mg/day (3 pills Q AM and 2 pills Q PM), for a total of 48 weeks of HCV therapy. His HIV antiretroviral therapy included fixed-dose combination tenofovir/emtricitabine, atazanavir, and ritonavir. Laboratory tests prior to HCV therapy initiation revealed the HCV genotype 1B, HCV viral load >69 000 00 IU/mL, alanine aminotransferase 50 U/L, interleukin-28B gene polymorphism allele C-T, CD4+ T-cell count 584 cells/μL, and HIV load <48 copies/mL. Following HCV therapy initiation, his HCV viral load at week 1, 3, and 4 was 503 520, 7189, and <43 IU/mL, respectively. In addition, his HCV viral load remained undetectable at weeks 12 and 24. The patient did not return to clinic after completing 24 weeks of HCV therapy. Review of pharmacy records confirmed that the patient failed to refill medications on the day of his last visit (23 February 2012). After multiple outreach efforts, the patient was reengaged in care on 29 June 2012. The patient acknowledged that he had relapsed on using methamphetamines and discontinued all his medications the day after his last medical appointment. Upon his return, his CD4+ T-cell count was 569 cells/μL and HIV load >10 000 00 copies/mL. However, his HCV viral load remained undetectable 21 and 24 weeks after the patient interrupted HCV therapy. The patient had achieved sustained viral response (cure) after 24 weeks of HCV triple therapy.

If we consider that the average half-life of a human hepatocyte is approximately 5 months [1], in order to achieve a new HCV-free generation of hepatocytes, we will need 6 months of therapy when using regimens that contain 1 agent with direct activity against HCV, such as telaprevir. This perhaps accounts for a prior observation in HIV-negative patients who achieved HCV sustained viral response after receiving 24 weeks of a telaprevir-based regimen [2], similar to our patient. Further studies are needed to confirm this clinical observation.

Note

Potential conflicts of interest. Author certifies no potential conflicts of interest. The author has submitted the ICMJE Form for Disclosure of Potential Conflicts of Interest. Conflicts that the editors consider relevant to the content of the manuscript have been disclosed.

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