Interferon- and RBV-Free Treatment With LDV and SOF Is Efficacious in Patients Coinfected with HCV and HIV

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Treatment of patients coinfected with hepatitis virus C (HCV) and human immunodeficiency virus (HIV) using a once-daily, oral, fixed-dose combination of the HCV nonstructural protein 5B (NS5B) inhibitor sofosbuvir (SOF) and the HCV NS5A inhibitor ledipasvir (LDV) achieved a rate of sustained virologic response 12 weeks after conclusion of treatment (SVR12) of 98%. The phase 2 study results were presented by Shyam Kottilil, MD, National Institute of Allergy and Infectious Diseases, Bethesda, Maryland, USA.

Patients coinfected with HCV and HIV tend to respond poorly to interferon-based therapy and are at higher risk of treatment-related toxicities and adverse events. Treatment options are limited. There is some evidence that interferon-free therapy may work as well in patients who are HIV positive or negative.

This open-label study evaluated the safety, tolerability, and efficacy of an oral, once-daily, fixed-dose combination of LDV 90 mg and SOF 100 mg in 50 patients coinfected with HIV and HCV genotype 1. The 12-week interferon- and ribavirin (RBV)-free regimen included antiretroviral agents for 37 of the 50 patients (tenofovir and emtricitabine along with efavirenz [n = 15], raltegravir [n = 10], rilpivirine [n = 8], rilpivirine plus raltegravir [n = 3], or efavirenz plus raltegravir [n = 1].

The primary end point was SVR12. Safety end points included adverse events and discontinuations, HIV breakthrough evident as > 400 HIV RNA copies/mL, CD4 T-cell counts and T-cell percentage, and renal parameters. Viral kinetics during the first 36 hours of treatment were charted in 10 patients in each group. The groups were comparable at baseline concerning median age, median HCV RNA, and prevalence of interleukin 28B non-CC genotype but differed in prevalence of males and African Americans, prevalence of genotype 1a, and prevalence of stage 3 fibrosis.

Both groups displayed a pronounced treatment response, with 100% of patients in both groups having HCV RNA below the level of detection at 4 weeks of treatment. The SVR12 for those untreated and treated with antiretrovirals was 100% (13/13) and 97% (36/37), respectively.

Concerning adverse events in ≥ 5% of the patients, no deaths, grade 4 adverse events, or event-related discontinuation were evident. The absence of antiretroviral treatment was associated with more pain (3/13, 23%, vs 3/37, 8%), fatigue (3/13, 23%, vs 2/37, 5%), and diarrhea (2/13, 15%, vs 2/37, 5%), with nasopharyngitis being more prevalent in those receiving antiretrovirals (2/13, 5%, vs 4/37, 11%). The numbers of affected patients were low.

CD4 T-cell absolute counts and CD4 T-cell percentages remained comparable and constant throughout treatment for both groups. Renal parameters in patients treated with antiretrovirals did not change appreciably during treatment.

The once-daily, oral, fixed-dose combination of LDV and SOF yielded a SVR12 of 98% (49/50) in patients coinfected with HIV and HCV. The sole exception was a patient with a transient HIV breakthrough due to a 4-day lack of treatment compliance during travel. Re-establishment of the treatment led to re-suppressed viral load. The combination could be safely given along with several antiretroviral regimens, with no clinically significant CD4 T-cell count or HIV RNA changes, or renal toxicity.

The data indicate the value of the interferon- and RBV-free treatment strategy for HIV/HCV-coinfected patients.