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Editorial

Response-Guided Treatment with an Ultrarapid Virological Response Creates the Future of Interferon-Free Treatment against Hepatitis C

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Lau, *et al*. [1] reported the results of a phase 2, open-label, proof-of-concept study of 3-week response-guided direct-acting antiviral therapy for chronic hepatitis C genotype 1b patients. Rates of sustained virological response at 12 weeks (SVR12) after completion of therapy of three treatment groups (sofosbuvir, ledipasvir and asunaprevir; sofosbuvir, daclatasvir and simeprevir; or sofosbuvir, daclatasvir and asunaprevir) who achieved an ultrarapid virological response (URVR, plasma HCV RNA < 500 IU/mL by day 2, measured by COBAS TaqMan HCV test, version 2.0) were 100% for all three groups, although patients with URVR received only 3 weeks of therapy.

The results of this trial involving patients with a mean age of 41, 40 and 31 years and fibrosis stage F0-F1 of 67%, 67% and 100%, respectively, were excellent [1]. The results of the trials involving patients with HCV genotype 3 infection, advanced fibrosis and/or elderly patients would have been even more interesting if the authors had emphasized the factors associated with URVR in “difficult-to-treat” patients.

HCV genotype 3 infection is the most "difficult-to-treat" HCV genotype by interferon-free regimen worldwide [2]. SVR12 rates of patients with advanced fibrosis seem worse than those of patients with non-advanced fibrosis [3,4]. The older the patients are, the more medicines they need for their comorbid disorders. Interferon-free regimens against patients with HCV have shortened treatment duration, achieved more effective treatment results, and lessened adverse events. In our hospital, situated in an urban area of Japan, the proportions of patients aged 60 years or older with HCV genotypes 1 and 2 infection are 77% and 60%, respectively (unpublished data). Some of these patients have several comorbid disorders, making it difficult to even use a combination of two direct-acting antivirals (DAAs) against HCV, due to drug-drug interaction and others. Of course, it is preferable for older patients to have shorter treatment durations, and they would benefit from incurring less adverse events, but three or more of DAAs may be needed to obtain a better treatment response.

In any events, the results reported by Lau *et al*. [1] are wonderful. In addition, they also reported that URVR is very important marker for predicting SVR12 in 3 weeks with combinations of three drugs. Their study may be preliminary, but response-guided interferon-free treatment may pave the way through shortening the duration of treatment. The precision medicine initiative [5] may yet prove to be true.

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Competing Interests

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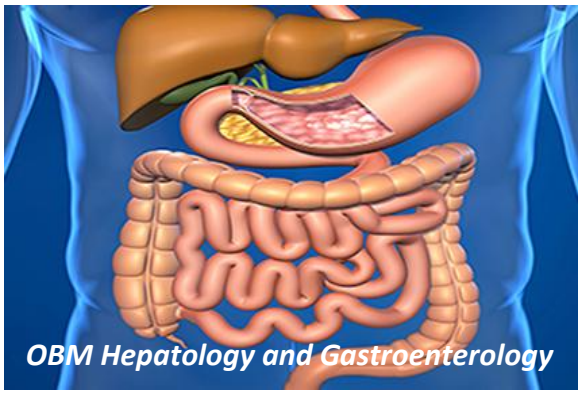

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