Hep C Drugs Are Highly Effective, but There's Still Room for Improvement

A meta-analysis of major clinical trials of hepatitis C treatments identified various subgroups who have unmet needs.

March 27, 2017

A meta-analysis of major clinical trials of hepatitis C virus (HCV) treatments has concluded what is increasingly apparent in the era of direct-acting antiviral therapy: The drugs are highly effective. There is room for improvement, however, as subgroups of the hep C population still have unaddressed needs.

Publishing their findings in the Annals of Internal Medicine, researchers reviewed data from 42 published clinical trials of eight-week—or longer—courses of the following direct-acting antiviral (DAA) regimens: Harvoni (ledipasvir/sofosbuvir); Olysio (simeprevir) and Sovaldi (sofosbuvir); Daklinza (daclatasvir) and Sovaldi; Viekira Pak (ombitasvir/paritaprevir/ritonavir; dasabuvir); Zepatier (grazoprevir/elbasvir); Technivie (ombitasvir/paritaprevir/ritonavir); and Epclusa (sofosbuvir/velpatasvir). Ribavirin was sometimes given as an adjunct to DAA therapy.

The trials saw less than 10 percent of participants experience serious adverse health events, a less than 10 percent rate of participants being lost to follow-up and a less than 5 percent rate of participants discontinuing treatment.

The evidence regarding DAA treatment for genotype 1 of hep C was particularly robust. Among six regimens tested, cure rates were greater than 95 percent for most drug combinations and patient populations.

Treating genotype 3 remains more complex, and there are fewer available DAA regimens approved for this population. The researchers found that the most effective regimens for those with genotype 3 who do not have cirrhosis were Harvoni or the pairing of Daklinza and Sovaldi. Among those with genotype 3 and cirrhosis, Epclusa offered higher cure rates.

Those with genotype 3 who had either the compensated and decompensated stages of cirrhosis had lower SVR rates, as did those being re-treated for hep C and those with resistance to the NS5A inhibitor class of DAAs. Adding ribavirin and extending the duration of treatment were associated with higher cure rates in these subgroups.

There were fewer available studies of people with genotypes 2, 4, 5 and 6. Generally, regimens of 12 weeks or longer cured more than 92 percent of participants in these trials. People with these genotypes who took Epclusa had a 99 percent cure rate.

Cure rates were also promising among subpopulations that traditionally have had greater challenges in succeeding on hep C treatment. This includes those coinfected with HIV, with decompensated cirrhosis, severe chronic kidney disease and a liver transplant. However, treatment options for those with severe chronic kidney disease or decompensated cirrhosis remain limited, and cure rates can dip down into the mid-80 percent range. For those with such advanced cirrhosis, rates of adverse health events on hep C treatment are high.

Ribavirin still has a place in maximizing the benefits of hep C treatment for some, the study authors found, in particular for those with genotypes 1 or 3 or cirrhosis or those who have been treated before.

To read the study abstract, click here.

To read a press release about the study, click here.

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