Treating Hepatitis C When You Have Cirrhosis

For those with advanced liver disease, treatment for hepatitis C is more complex. But the new treatments offer considerable hope as well.

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The recent revolution in hepatitis C virus (HCV) treatment has greatly brightened the prospects for individuals with the virus who have cirrhosis of the liver. The new crop of treatments for hep C are much more effective than those that relied on the onerous injectable drug interferon. And at least for people with compensated cirrhosis, new research has suggested that a cure may grant them a life span comparable to that of the general population.

There are two forms of cirrhosis: compensated cirrhosis, in which the liver has suffered considerable scarring but is still functioning, and decompensated cirrhosis, in which such scarring has compromised the organ’s ability to do its job and a liver transplant is often in order. The survival prospects of those with the latter form of the disease are poor.

Researchers are still piecing together the various long-term benefits hep C treatment may provide people with decompensated cirrhosis in particular. Because the current crop of highly effective HCV treatments have been studied only in advanced trials and have been on the market for only the past couple of years, investigators have yet to firmly establish how a cure may extend lives or lead to an improvement in liver-disease-related symptoms. But recent research looks hopeful.

Treating hep C with compensated cirrhosis:

According to Tianyan Chen, MD, a clinical fellow at the University of California, San Francisco, people with hep C and compensated cirrhosis have quite a few treatment options before them and a good chance of achieving a cure, comparable to those without cirrhosis.

“I think that’s very, very exciting for someone who potentially has a scarred liver,” says Chen, who coauthored a recent review of hep C treatment options for those with cirrhosis, with findings published in Current Opinion in Gastroenterology.

Research has shown that curing hep C in those with compensated cirrhosis can stop the progression of liver scarring, known as fibrosis, and can even dial back the condition in some people.
When selecting the proper hep C regimen for this population, clinicians will consider an individual’s viral genotype (1 through 6), any previous experience with treatment, kidney function and the possibility for drug-drug interactions (certain hep C meds interact negatively with HIV drugs, for example).

Hep C cure rates for those with compensated cirrhosis are typically in the 90 to 100 percent range. But achieving such success often requires the addition of ribavirin, a longer treatment time (16 or 24 weeks instead of eight or 12) or both. Ribavirin can cause anemia; but otherwise hep C treatment is generally well tolerated among this population.

Treating hep C with decompensated cirrhosis:

According to Chen’s recent paper, the goals of hep C treatment among those with decompensated cirrhosis who are not candidates for a liver transplant are as follows: reduce the complications related to advanced liver disease, improve the organ’s ability to function and, above all, lower the risk of death. Early research suggests that these outcomes are indeed achievable, at least on average. As for those on a transplant waiting list, HCV treatment can lead to improvements in their MELD (model for end-stage liver disease) and Child-Pugh scores—assessments that indicate the severity of liver disease.

But there’s a potential catch-22 associated with such an improvement in a MELD score. Because the score is used to prioritize those seeking liver transplants, if someone with decompensated cirrhosis who is on a transplant waiting list is cured of hep C and experiences a MELD score drop, he or she may still need a transplant but wind up having a harder time getting one. This theoretical risk is known as “MELD purgatory.”

Researchers in the United Kingdom recently conducted a study of hep C real-world treatment outcomes (meaning they looked at people not in a tightly controlled clinical trial) among people with decompensated cirrhosis treated in 2014. The study is notable for its use of a comparison group. Due to the proven success of hep C treatments, it is now unethical to conduct a study in which one group is denied treatment to compare their outcomes with a treated group. So these researchers, who published their findings in the Journal of Hepatology, did their best to fashion a control group by looking back at records of a comparable cohort of individuals in the U.K. who were monitored during the period just before the new, highly effective HCV treatments became available.

The study included 467 people who received hep C treatment, who either had decompensated cirrhosis (409 people) or who were at risk of irreversible liver disease. They were treated with Sovaldi (sofosbuvir) and Daklinza (daclatasvir) or with Harvoni. Some took ribavirin as well. Eighty-two percent were cured, including 91 percent of those with genotype 1 and 69 percent of those with genotype 3.

Note: Because the liver metabolizes the protease inhibitor class of hep C meds, they are not recommended for those with decompensated cirrhosis. This includes Olysio (simeprevir) and the combination-tablet regimens Viekira Pak (ombitasvir/paritaprevir/ritonavir; dasabuvir), Zepatier...
(grazoprevir/elbasvir) and Technivie (ombitasvir/paritaprevir/ritonavir), each of which contains that class of drug.

The UK study’s co-lead author William Irving, PhD, a professor of virology at The University of Nottingham, calls such cure rates “fantastically better” compared with those seen with previous generations of HCV treatments.

Irving and his colleagues will need to observe the study group longer to establish firmer conclusions about the potential benefits of hep C treatment among those with decompensated cirrhosis. But he sees considerable promise along these lines after observing the cohort for a year following the end of therapy. The study’s findings suggest that, overall, hep C treatment was associated with a combined outcome that included a reduction in the risk of death, liver transplantation and hospital admission. And if individuals survived past six months posttreatment, their chances of developing a serious health complication appeared to decrease.

During the first six months after those who received treatment finished their drug regimen, their MELD scores tended to improve, with an average drop of 0.85. (MELD scores range from 6, indicating less liver-related illness, to 40, indicating grave illness. The average score for someone undergoing a liver transplant is 20.) By comparison, the untreated group’s MELD score worsened by an average increase of 0.75.

The researchers found that by combining the factors of age and what is known as serum albumin level (this is a marker that indicates how well the liver is synthesizing proteins) in their analysis, those older than 65 whose liver was doing a poor job of protein synthesis were less likely to benefit from hep C treatment—in terms of “functional outcomes,” including liver function, liver cancer, health events related to decompensation, hospital admissions and death.

The researchers also found that having detectable hep C at week two of treatment was an independent factor predicting whether an individual would achieve a sustained virologic response 12 weeks after completing therapy (SVR12, considered a cure), especially among those with genotype 3 of the virus. The researchers theorized that clinicians could use this factor to help decide whether to extend treatment to 24 weeks, in particular for those with genotype 3.

As for MELD purgatory, according to Irving, the researchers’ findings thus far suggest that this potential outcome may not be quite the threat clinicians have feared. More follow-up among the cohort is needed, however.

According to Chen’s review of hep C treatment among all people with cirrhosis, “Safety concerns remain paramount in those with advanced liver disease.”

“The main message is that many patients with cirrhosis can be successfully treated, especially those with compensated cirrhosis,” says Chen. “In patients with decompensated cirrhosis, treatments tend to be less effective in general due to risk of toxic effect and poor liver function—this is the group a discussion of risk-benefit balance is important to select those who would benefit the most from treatment.”