



C Change

RAPID TESTING FOR HEPATITIS C WAITS FOR ADVANCES IN HEPATITIS C TREATMENT TO CATCH UP

by Chael Needle

As a step toward gauging the impact of and forming a federal response to the hepatitis epidemic in the U.S., the House Oversight and Government Reform Committee recently held a hearing entitled, “Viral Hepatitis: The Secret Epidemic.” The Congressional forum, relying in part on an Institute of Medicine report released last January that provided a context for the discussion, recommended that the government move forward with a national hepatitis strategy and also channel resources toward the prevention, treatment, and cure of hep B and C.

The report, entitled *Hepatitis and Liver Cancer: A National Strategy for Prevention and Control of Hepatitis B and C*, states that, while between 3.5 and 5.3 million Americans are estimated to be living with chronic infection of hepatitis B (HBV) and hepatitis C (HCV), most are unaware of their infection. About sixty-five percent of those with HBV and about seventy-five percent of those with HCV do not know they carry viruses that, if untreated, often progress to HCC, a type of liver cancer, and end-stage liver disease. If one looks at the epidemic worldwide, only HIV surpasses HBV/HCV in terms of the number of all viral-related deaths. In response, the report calls for new approaches to surveillance, education, immunization, health-care, and social services. The report encourages increased awareness among at-risk populations and the general public as well as increased access to screening and treatment.

The global reach of hepatitis C, its seriousness as a chronic disease, and the fact that most individuals who are living with HCV are unaware that they are infected are some of the reasons why OraSure Technologies developed rapid HCV testing, says Douglas A. Michels, the company’s president and CEO of OraSure Technologies. OraSure’s OraQuick HCV Rapid Antibody Test has

become the first FDA-approved rapid HCV test in the United States. Based on the same technology platform used by the OraQuick rapid HIV tests, the test works by detecting HCV antibodies and offers results in twenty minutes. In the U.S., the test is approved for use with venous whole blood specimens. In the European Union, the test has been approved since December 2009 for use with venous whole blood as well as finger stick whole blood, oral fluid, serum, and plasma. The company is currently pursuing FDA approval for finger stick and oral fluid tests.

The rapid HCV test is currently only FDA-approved for testing those in high risk categories or those who present with HCV-related symptoms.

“What I would have liked to have seen, frankly, is for this test to have been approved for [routine] screening,” says Eugene Schiff, MD, University of Miami, Center for Liver Diseases, who has used the OraQuick test as a treating physician. The average primary care doctor, he says, is not going to test for HCV unless the patient is found to have elevated liver enzymes. And if the physician queries the patient outright about high risk factors like past injection drug use, says Dr. Schiff, the response is very often not accurate. Injection drug use is behavior many patients hide.

One solution: Don’t ask patients to self-report—just test. “I would like to see this test done in every person who came in, but this is not how the test is licensed,” says Dr. Schiff. “So right now [those who are tested are] going to be people who, if queried, give a risk factor for C—if they had a transfusion before 1992 [when the



Douglas A. Michels

blood supply started to be screened for hep C], if they ever injected themselves, if they’re a healthcare provider, if they’ve been in a setting where they’ve had a risk for getting stuck.”

Although there is increased awareness about pre-1992 transfusion-related hepatitis C infections, many who are undiagnosed are unaware that they have even put themselves at risk for hepatitis C infection.

Comprising the largest group of HCV infectees are those who have used injection drugs. “And these are people who are not hardcore drug addicts,” explains Dr. Schiff. During the Vietnam War era and later, the liberal atmosphere allowed for drug experimentation, especially among youth, explains Dr. Schiff. “They forgot about it. Years went by...[and now they can’t] link why something they did forty years ago would impact something they have now,” says Dr. Schiff.

The rapid HCV test will be useful in detecting those with chronic hepatitis C, and usually this means older infections.

Detecting new infections, when the

infection is in its acute phase, is not the pertinent issue here, according to Dr. Schiff. The incidence of acute C is very low due to blood-screening procedures and fewer casual experimenters with injection drug use, he says. And the rapid test will unlikely show a positive result if someone is newly infected.

“If you’ve had this for forty years you’ve got a forty percent chance of having cirrhosis and if you have cirrhosis you run a risk of having a three to five percent chance of developing cancer of the liver,” says Dr. Schiff. “There’s almost an epidemic of cancer of the liver related to chronic C. Once a week in our tumor clinic...we see six or seven new cases of hepatocellular carcinoma. Most all of them have a background of chronic C-related cirrhosis and most of it is insidious.”

One advantage of the rapid HCV antibody test, he says, is that any patient testing positive can then be tested for HCV-RNA, the test that confirms chronic HCV infection, during the same visit. Receiving point-of-care results will become more significant, he says, as the treatments currently in development come of age.

Michels agrees: The upside of knowing one’s status is that “very exciting” current therapies to cure hepatitis C infection are in development by Merck, Vertex, and Roche, among others. (Merck has been collaborating with OraSure on the development and promotion of the OraQuick HCV test.) “With the rapid tool in diag-

nosing hepatitis, we can identify more people infected, get them connected to care, and cure them of the infection.”

The incentive to get tested will improve as better treatment options—namely, direct antivirals—become available, says Dr. Schiff, listing protease inhibitors, polymerase inhibitors, and NS5A inhibitors as ones on the horizon. “With the rapid development of a spectrum of direct antivirals, in about five years you’re going to have an all-direct-antiviral regimen; it’s going to be oral, it’s going to be combination, and you’re going to have higher cure rates with shorter durations of treatment.”

New treatment options, says Dr. Schiff, “will change the success rate of treating hepatitis C.” The current treatments, pegylated interferon and ribavirin, come with hard-to-manage side effects, he says, and, among genotype 1, achieves a cure rate of about forty percent of patients. And that cure rate changes, he says, in real-world treatment settings. “In the VA medical system there are over 136,000 cases of C. Now out of all the cases, do you know how many completed treatment for C? Ready? 1 out of 56.” Notes Dr. Schiff, the barriers to noncompletion would be fewer if we got all of our hepatitis C ducks in a row: a public education campaign about risk factors, increased access to care, routine physician testing, and access to physicians who know how to treat HCV and also manage the side effects.

Dr. Schiff predicts that the direct antivirals will increase the cure rate to seventy-five or eighty percent, or higher, and, when this happens, give those at risk more of an incentive to get tested. “What you want is kind of what you have for HIV right now—test and treat.”

OraSure hopes that its rapid HCV testing follows in the footsteps of its rapid HIV testing. If and when the rapid HCV test is approved for finger stick whole blood and oral fluid, it can join rapid HIV testing across a variety of healthcare settings.

Michels adds that one of the key benefits of rapid testing and twenty-minute results is that “well over ninety-nine percent of individuals get their results right there on the spot and those individuals who test positive can be immediately

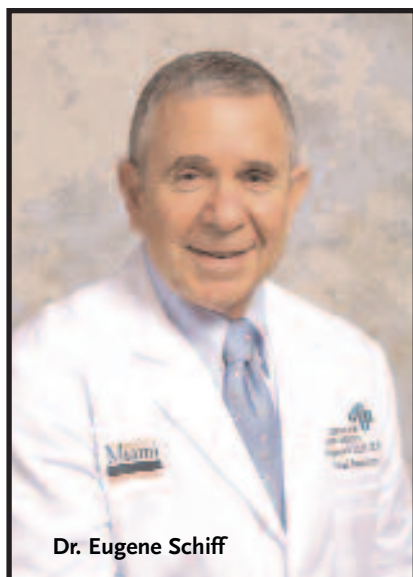
handed off and connected to appropriate care or appropriate follow-up and then they can immediately have questions answered about how they can reduce their future risk of infection and stay negative.”

“If the FDA approves for finger stick and oral fluid then we could apply for a waiver; [with a waiver] then the product can be used in outreach settings and physician offices,” says Michels, who believes this could have a “very significant positive impact” on reaching those at risk. Right now, the venous whole blood rapid HCV test can only be sold to laboratories performing moderately complex diagnostic tests, he continues, and there are about 40,000 of those in the United States. Sales will start in late July and early August.

Building a portfolio of clinical studies and submitting for review its progress, OraSure is also currently seeking FDA approval to bring its OraQuick rapid HIV test direct to consumers as an over-the-counter product, as well, says Michels. “We believe that making a rapid HIV test available to consumers over the counter will be another major step toward helping address the stigma issue surrounding HIV/AIDS. Assuming that that product someday is approved by the FDA for over-the-counter sale direct to consumers, we’re going to do our part to educate the general public on the importance of getting tested, knowing their status and practicing safe behavior.”

For now, though, “[w]e’re going to continue to work with the community to increase awareness around hepatitis C infection. We’ve worked very closely with organizations like NAPWA, the Black Leadership Commission on AIDS, Latino Commission on AIDS, NASTAD, NMAC, and so on, as well as with state and local public health providers. Our commitment to the community goes well beyond HIV and we’re going to continue that. And we’re very hopeful that this will be an important tool not only in the fight against HIV/AIDS but to promote the general health and well being of the community.”

Chael Needle reported on a new anti-HIV CCR5 inhibitor candidate in last month’s Treatment Horizons.



Dr. Eugene Schiff