The Medical Community Wakes Up to a Dangerous Threat to People with Hepatitis B – Coinfection with Hepatitis D

June 19, 2017 By Christine Kukka

In the U.S. and around the world, the medical community is finally acknowledging a hidden threat to people with hepatitis B – a virulent liver coinfection that requires the presence of the hepatitis B surface antigen (HBsAg) to survive.

Hepatitis D (Delta), which causes the most severe liver infection known to humans, infects between 15 to 20 million people worldwide and an estimated 20,000 people living with chronic hepatitis B in the U.S.

For years, health officials assumed hepatitis D did not threaten Americans and occurred primarily in Central Asia and Sub-Saharan Africa. However, recent U.S. Centers for Disease Control and Prevention (CDC) studies found 4 to 5 percent of Americans with chronic hepatitis B are also infected with hepatitis D.

As a result of these findings, researchers including Hepatitis B Foundation's Medical Director Dr. Robert Gish, are now pushing medical organizations to establish hepatitis D testing and monitoring guidelines so doctors will start testing patients for this dangerous liver disease.

Recently, the foundation sponsored a webinar, attended by dozens of healthcare providers, patients and officials from around the world, in which Dr. Gish outlined whom should be tested for hepatitis D, and how it should be treated. A new webinar that examines hepatitis D prevalence in the U.S. is scheduled for 3 p.m. (EST), Wednesday, June 28. To register for the webinar click here.

How do people get infected with hepatitis D? Infection occurs when people are exposed to blood and body fluids from someone with an active hepatitis D infection. Basically, they get both hepatitis B and D in one exposure. This is called an acute coinfection. Some healthy adults are able to clear both infections, but they often experience serious liver damage during the clearance or recovery phase.

Another way to become infected is if someone infected with chronic hepatitis B is exposed to

someone with hepatitis D. This is called a superinfection, and in 90 percent of cases, people with chronic hepatitis B will also develop chronic hepatitis D.

Who is at risk of hepatitis D? Anyone with chronic hepatitis B who themselves or their family comes from Sub-Saharan Africa, China, Russia, Middle East, Mongolia, Romania, Georgia, Turkey, Pakistan and the Amazonian River Basin should be tested. Hepatitis D rates in some of these countries can reach up to 30 percent in people infected with chronic hepatitis B.

What medical conditions suggest hepatitis D? Anyone with chronic hepatitis B who is not responding to antiviral treatment, or who has signs of liver damage even though they have a low viral load (HBV DNA below 2,000 IU/mL) should be tested. Fatty liver disease (caused by obesity) and liver damage from alcohol or environmental toxins should be ruled out before testing for hepatitis D.

Often, people with hepatitis D have low viral loads (even if they are hepatitis B "e" antigen HBeAg-positive), but they have signs of liver damage, including elevated liver enzyme (ALT/SGPT) levels.

Do hepatitis B antivirals work against hepatitis D? No. The hepatitis D virus (HDV) is structurally different from the hepatitis B virus (HBV) and does not respond to tenofovir and entecavir used to treat hepatitis B. Hepatitis B antivirals will lower HBV DNA, but they don't reduce HBsAg, which HDV need to thrive and reproduce.

How is hepatitis D treated? The only proven hepatitis D treatment is pegylated interferon. Interferon cures hepatitis D 15 to 25 percent of the time after one year of treatment. Once interferon clears hepatitis D, doctors treat patients who continue to be infected with HBV with antivirals. There are dozens of research companies now looking into hepatitis D treatment, and if researchers can find a cure for hepatitis B that eradicates HBsAg, it will also be effective against hepatitis D.

How should people with hepatitis D be monitored? According to Dr. Gish, doctors should:

- Monitor patients' ALT/SGPT and liver function at least every six months
- Perform an ultrasound of the liver and conduct a liver cancer biomarker panel (including AFP, AFPL3% and DCP) every six months;
- And, perform viral load (HBV DNA) and HDV RNA testing every six months.

How is hepatitis D prevented? The hepatitis B vaccine prevents hepatitis D infection, as does use of safe sex and safe injection practices. According to Dr. Gish, all hepatitis B-positive pregnant women should be tested for hepatitis D if they or their families are from a country with high rates of hepatitis D, or if they have signs of liver damage — even if they do not come from a region with high hepatitis D rates.

If a pregnant woman is infected with either hepatitis B and/or hepatitis D, immunizing her newborn with the first dose of the hepatitis B vaccine within 12 hours of birth and giving the baby a dose of HBIG (hepatitis B antibodies) will prevent both infections.

Bottom line, if you are infected with chronic hepatitis B, you should be tested for hepatitis D if:

- You or your family comes from a region with high rates of hepatitis D; and/or
- You have a low viral load, but you continue to have signs of liver damage, indicated by elevated ALT/SGPT or an ultrasound exam of your liver, if your doctor has ruled out fatty liver, NASH or alcohol-related liver damage.

Talk to your doctor about getting tested. Click here for a hepatitis D fact sheet to give to your doctor and click here for a patient-oriented fact sheet. An affordable hepatitis D test has recently become available in the U.S. For more information, click **here**.

- Find answers to frequently-asked-questions about hepatitis D here.
- To watch the webinar featuring Dr. Gish discussing the hidden, hepatitis D epidemic, click here.

This article originally appeared in the Hepatitis B Foundation's Hep B Blog; permission to reprint excerpt granted.
