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Hepatitis B

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Non-liver Hepatitis B Symptoms Do Not Vary by Genotype

A team of French researchers, writing in the August 2005 issue of the *Journal of Hepatology*, reported they found no differences in the rate of extrahepatic (occurring outside the liver) health problems in 190 hepatitis B patients with a variety of hepatitis B virus (HBV) genotypes (mostly genotypes A, D, C and E). Most of the patients were male and had elevated alanine aminotransferase (ALTs) and 27% had cirrhosis (liver scarring).

The team studied the patients for at least six months, looking for symptoms that were not liver-specific, including skin disorders or arthritis-like symp-

toms. Sixteen percent of patients had biological extrahepatic symptoms. But these symptoms were found in patients with antibodies to the “e” antigen (HBeAg), elevated platelet count and pre-core HBV mutations and did not vary between HBV genotypes.

Establish “Safe” HBV DNA Levels for Infected Healthcare Workers

Many healthcare workers have become infected with hepatitis B due to accidental exposure to the virus through needle sticks. However, no global guidelines exist that define when HBV-infected healthcare workers should be barred from performing exposure-prone medical procedures, such as surgery.

A group of researchers, reporting in the September 2005 issue of the *Journal of Viral Hepatitis*, suggest a standard should be established that defines safe HBV DNA (viral load or quantity of virus in the bloodstream) levels for HBV-infected doctors and nurses who perform exposure-prone procedures. In addition to defining an HBV DNA “safe” ceiling, protocols must be established for monitoring healthcare workers, considering that HBV DNA levels can vary over time.

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Researchers: To Cure Hepatitis B, Drugs Must Clear CCC DNA from Liver Cells

Researchers at the Scripps Research Institute recently reported that the reason interferon alpha is so ineffective against hepatitis B is that it fails to effectively purge liver cells of covalently closed circular (CCC) HBV DNA.

For years, interferon alpha was the only U.S. Food and Drug Administration-approved interferon for treating hepatitis B and its per-

formance against hepatitis B has always been lackluster.

Researchers, writing in the September 2005 issue of the *Journal of Virology*, described how HBV CCC DNA in the liver cells of HBV-infected transgenic mice remained, despite treatment with interferon alpha. They suggest different types of interferons might be more effective in clearing liver cells of this stubborn viral DNA, which is suspected of causing liver cancer.

HBV Genotype C More Virulent than Genotype B in Head-to-Head Study

Thai medical researchers compared symptoms and liver progression in two nearly identical groups of 65 hepatitis B patients with either genotype B or C. The patients were closely matched in age, gender and stage of infection (such as asymptomatic carrier, or cirrhotic).

Writing in the September 2005 issue of the *Journal of the Thai Medical Association*, researchers reported that ALT levels, which indicate liver damage when above normal,

were higher in genotype C patients.

HBeAg was significantly more frequent in genotype C patients (50.8% vs. 30.8%), and it persisted for longer. However, HBV DNA levels were similar between the two groups.

Researchers concluded that patients with genotype C had a significantly higher rate of HBeAg, experienced delayed HBeAg seroconversion, and exhibited more severe liver disease compared to those with genotype B.

Chinese Researchers Examine Liver Health in Patients with Pre-core Mutations

A team of Chinese researchers closely studied the livers of 54 hepatitis B patients with and without pre-core and core promoter viral mutations. When these viral mutations occur, the virus is able to replicate without secreting much HBeAg. Increasingly, researchers are finding that many chronic hepatitis B patients develop pre-core mutations during adulthood.

Writing in the September 2005 issue of the journal of *Alimentary Pharmacology &*

Therapeutics, researchers reported that patients with core promoter mutations experienced more severe liver inflammation and fibrosis and had more hepatitis B core antigen. The report affirms other findings that HBV with core promoter mutations produce more liver damage than “wild” or non-mutated HBV.

Warning: Pegylated Interferon May Cause or Worsen Autoimmune Hepatitis

An August article in *Medscape* recently reminded doctors and patients that pegylated interferon, which was recently approved by the FDA for hepatitis B treatment, can cause or worsen autoimmune disorders, including hepatitis. Interferons give the immune system an extra boost to fight infection.

However, when autoimmune hepatitis occurs, the body's immune system attacks liver cells, even healthy ones. Researchers speculate that a genetic factor may predispose some people to autoimmune diseases. About 70% of those with autoimmune hepatitis

are women, most between the ages of 15 and 40.

CDC: Greater HBV Prevention Efforts Needed in STD Clinics Nationwide

A U.S. Centers for Disease Control and Prevention (CDC) study of hepatitis B prevention efforts in sexually transmitted disease (STD) clinics between 1997 and 2001 found a rise in the number of clinics offering hepatitis B immunization (from 61% to 82%), but resources and vaccine follow-through remain limited.

While more clinics were offering HBV vaccines and education programs, many patients were not getting the full three shots needed for effective for hepatitis B prevention.

“Hepatitis B policies and vaccination and education efforts in STD clinics have improved,” researchers noted in the report published in the journal of *Sexually Transmitted Diseases*, “however, many barriers reported in 1997 remained in 2001.”

Localized Chemotherapy for Liver Cancer Doesn’t Reactivate Hepatitis B

When hepatitis B patients develop liver cancer (HCC), treatment options are limited. Chemotherapy, historically used to fight tumors, suppresses the immune system and often leads to a resurgence in HBV DNA and HBV-related liver damage.

A team of researchers, writing in the September 2005 issue of *The American Journal of Gastroenterology*, report that transcatheter arterial chemoembolization (TACE), which delivers chemotherapy only to the tumor through the artery that feeds it, may not cause reactivation of hepatitis B.

They studied 69 liver cancer patients who were treated with TACE, and 20 controls or untreated patients.

Three (4.3%) patients in the TACE group and two (10%) patients in the control group showed HBV reactivation. A twofold or more increase in HBV DNA was detected in 21 (30.4%) patients in the TACE group and four (20%) patients in the

control group.

Exacerbation of hepatitis B was found in four (5.8%) patients in the TACE group and no patients in the control group, but the difference between the two rates was not statistically significant. Three of the four reactivated patients showed spontaneous recovery within one month.

Researchers concluded that, “One session of TACE using doxorubicin and lipiodol does not significantly aggravate HBV hepatitis in patients with HBV-related HCC.”

Those Cured of HBV Infections Still at Risk of Reactivation During Chemotherapy

Canadian researchers, writing in the July 2005 issue of *Leukemia Lymphoma*, suggest that people who have resolved hepatitis B infection, indicated by the presence of surface antibodies, may still be at risk of hepatitis B reactivation during chemotherapy, which dramatically weakens the immune system.

The finding is significant, considering that one in 20 Americans has been infected by

HBV. Most cleared the infection and developed surface antibodies.

Doctors know that HBV-infected cancer patients nearly always experience a resurgence of HBV DNA and liver damage during chemotherapy. That is why current guidelines recommend prescribing an antiviral for these patients during chemotherapy.

But the team highlighted the experience of a 67-year-old man with B-cell lymphoma who developed hepatitis B reactivation following chemotherapy. Before chemotherapy began, he had tested negative for HBsAg, positive for hepatitis B core antibody (anti-HBc), which indicates a past infection, and weakly positive for hepatitis B surface antibody. Despite treatment with lamivudine, the patient died of liver failure.

“Our experience indicates that patients who are negative for HBsAg but positive for anti-HBc are still at risk for reactivation of latent hepatitis B during and after chemotherapy and

may be considered for prophylaxis (antiviral),” the researchers recommend.

Genotype A Response Best to Interferon Alpha, Genotype D Response the Worst

An article in *Gut*, published by the British Society of Gastroenterology, found patients with HBV genotype A respond best to standard interferon.

Researchers followed 144 patients with either genotype A or D treated with interferon. Those with genotype A and elevated ALT levels experienced a sustained response six months after treatment, compared to genotype D (49% vs. 26%) patients with elevated ALTs.

The researchers suggested genotype screening is valuable in gauging potential success of interferon treatment.

Telbivudine Continues to Show Promising Results in HBeAg-Positive Patients

A report on a one-year trial of telbivudine alone, and in combination with lamivudine (Epivir-HBV), shows

telbivudine by itself is a powerful antiviral, according to a report published in the August 2005 issue of *Gastroenterology*.

The researchers conducted a randomized, double-blind, multicenter trial that evaluated telbivudine by itself at two dosage levels (400 or 600 mg/day), and telbivudine 400 or 600 mg/day plus lamivudine 100 mg/day. These four groups were also compared with a group that received just lamivudine. The patients all had HBeAg.

At week 52, telbivudine alone showed a significantly greater reduction in HBV DNA levels than those treated with lamivudine only (six-fold vs. 4.5-fold). More telbivudine-only patients had undetectable HBV DNA (61% vs. 32%), and normal ALT levels (86% vs. 63%) compared with those taking just lamivudine.

Interestingly, the lamivudine and telbivudine combination treatment was not more successful than telbivudine alone. Phase III clinical trials of telbivudine are now beginning.



GUIDE TO HEPATITIS AND DISABILITY

The Hepatitis C Support Project has recently posted A Guide to Hepatitis and Disability on our Web site www.hcvadvocate.org that is one of the most comprehensive documents available on how to prepare and file for social security disability. Included in the Guide is helpful information on how to prepare and file for long and short term disability insurance. There is additional information on commercial disability insurance, and health insurance. There is also information on what to do if your claim is denied and a comprehensive list of web site links to and contact information for various state and federal social security offices.

This document was prepared by Christine Kukka and Jacques Chambers from a compilation of articles by Jacques Chambers found in his monthly Benefits Column, which appear on our web site at :

http://www.hcvadvocate.org/hepatitis/living_w_hepatitis_C.asp

We would be very interested in hearing from our readers about their experiences when filing for social security. If you would like to share your experience, please contact Alan Franciscus at alanfranciscus@hcvadvocate.org