

HEPATITIS B

Follow-up Tests on Children with Chronic Hepatitis B

Once children have been diagnosed with chronic hepatitis B, it is important to monitor the health of their livers regularly so that any sudden changes are identified and treated as soon as possible.

Most children with viral hepatitis have few symptoms or signs of liver disease. However, researchers have discovered that cirrhosis and liver cancer can in rare cases develop even when children have no symptoms.

During the childhood and teen years, the immune system can make the transition from the immune tolerant stage, when it tolerates the hepatitis virus, to the intolerant stage, when it attacks infected liver cells in an effort to eradicate the virus.

Doctors need to know when a child or adolescent begins to fight the virus, so they can provide treatment if the body's immune system damages the liver during its eradication campaign.

How often each child's liver enzymes are checked varies. Currently, pediatric gastroenterologists and hepatologists lack detailed national standards for monitoring chronically infected children. Today, each doctor charts his or her own course, based on personal experience and the knowledge gained from doctors who treat chronically infected adults.

A child with abnormal liver enzymes may be checked far more frequently than a child who has a history of normal liver enzymes. Doctors customize the frequency and depth of follow-up to each patient.

Here are recommendations from three pediatric gastroenterologists experienced in treating children with viral hepatitis: Dr. Maureen Jonas of Children's Hospital Boston, Dr. Philip Rosenthal, Director of Pediatric Hepatology at the University of California Medical Center in San Francisco, and Dr. Kathleen Schwarz, Chief of the Division of Pediatric Gastroenterology and Nutrition at Johns Hopkins University School of Medicine.

If a child has had a history of normal test results for the liver enzyme Alanine

Aminotransferase (ALT), the doctors make the following recommendations:

Viral Tests: To determine if antibodies have developed to the e antigen or the surface antigen, tests for these antigens and antibodies should be conducted every year. These may be conducted more frequently if a doctor suspects a child is in the process of “seroconverting” or developing the e antibody.

ALT and Liver Function Tests: Drs. Jonas, Schwarz and Rosenthal generally conduct these tests, which are performed on a blood sample taken from the child, every six to 12 months.

The physicians stress that the frequency of these tests depends on the individual patient and other factors, including the patient’s age, gender, race, family history of liver cancer if it is known and how the child became infected (perinatally or household contact) if it is known.

In Europe, ALT tests are conducted every six months on chronically infected children.

Alpha Fetoprotein (AFP) Test: This test, also performed on a blood sample, reveals the presence of cancerous tumors in the liver. Recently, doctors began using this test in young patients when a researcher discovered that even children with normal ALTs developed cirrhosis and liver cancer.

Drs. Jonas, Schwarz and Rosenthal all recommend performing AFP tests every 12 months on infected children.

In Europe, AFP tests are conducted every six months.

Ultrasound: Doctors use ultrasound, which reveals the shape of the liver, to search for tumors or any change in the liver’s architecture or shape.

Dr. Rosenthal recommends an ultrasound in chronically infected children every year.

In young children, Dr. Jonas recommends an ultrasound every two years. However if a child is older than six, Dr. Jonas recommends an ultrasound every year.

Dr. Schwarz recommends an ultrasound every two years after 10 years of disease.

In Europe, ultrasound examinations of infected children’s livers are conducted every six months. They occur at the same time as AFP and ALT tests.