HBV: How Frequently to Monitor Chronic Hepatitis B

The following tests are recommended when patients are diagnosed with chronic hepatitis B:

- A doctor should take a complete medical history, asking about any family history of liver disease or cancer, and conduct a thorough physical examination.

- Every six months, (or more frequently if there is liver damage), patients’ ALT levels should be checked for signs of liver damage, and a complete blood count with platelets, liver (hepatic) panel, and prothrombin time tests should also be run. These all require a blood sample.

- The doctor should conduct a test for hepatitis B surface antigen (HBsAg) and antibodies, “e” (HBeAg) antigens and antibodies, and the core antibody (HBcAb). This should be done every three to six months after the initial diagnosis, and then at least annually. This requires a blood sample.

- HBV DNA, which shows viral load in the bloodstream, should be tested. This also requires a blood sample. The frequency of the test depends on viral load levels and whether ALT levels are normal.

- An alpha fetoprotein (AFP) test will check for liver cancer. It also requires a blood sample. The frequency of this test will depend on viral load and ALT levels.

- A baseline ultrasound on the liver to check for liver cancer or other damage is recommended. Additional ultrasounds may be recommended annually or more frequently if liver damage is suspected or if a patient has been infected for many years.

- A liver biopsy to evaluate the stage of liver disease is recommended if there are signs of liver damage and a patient has been infected for many years.

If these tests show signs of liver damage, a physician may recommend treatment with either antivirals (pills taken daily) or pegylated interferon (administered by a weekly injection under the skin). If interferon is considered, a genotype test on a blood sample should be performed to identify the hepatitis B virus (HBV) strain a patient has. Some genotypes respond better to interferon treatment than others.

Below is the monitoring schedule recommended for patients who are not candidates for treatment, and have normal ALT levels and no sign of liver damage:
HBeAg-positive people whose HBV DNA level is equal to or greater than 20,000 IU/mL should have:

- ALT levels tested every three to six months
- A viral test every year or more often to assess HBsAg and HBeAg antigen and antibody status.
- HBV DNA tested at least once a year.
- An AFP test and ultrasound at least once a year.

If ALT levels increase, treatment and a liver biopsy should be considered.

HBeAg-negative people with undetectable HBV DNA should have:

- ALT tested every six to 12 months.
- HBV DNA, ultrasound and viral tests should be conducted once a year, or as recommended by the doctor. AFP tests should be performed if a cancer risk is present.

If ALT levels increase, HBV DNA should be checked and other causes of liver damage should be ruled out.

ALANINE AMINOTRANSFERASE (ALT; formerly SGPT): an enzyme (also called alanine transaminase) produced in the liver when the membranes of liver cells break down.

ALPHA-FETOPROTEIN (AFP): a protein, measurable in the blood, that is often elevated in people with liver cancer.

COMPLETE BLOOD COUNT (CBC): an inventory of the cellular components of the blood, including red blood cell count, hematocrit and hemoglobin, white blood cell count, and platelet count.

HEPATIC PANEL or LIVER FUNCTION TESTS: a set of blood tests that measure levels of liver enzymes, proteins, and various other substances. Liver function tests are used to help diagnose liver disease, assess the degree of liver damage and determine if treatment is needed.

PLATLET OR THROMBOCYTE: a type of blood cell responsible for normal blood clotting.

PROTHROMBIN TIME (PT): a measure of blood clotting time. People with advanced liver disease may have a slower than normal PT.

ULTRASOUND: a method of visualizing the internal parts of the body using sound waves.

VIRAL LOAD or HBV DNA: the amount of virus in the blood or other tissues, usually expressed in terms of copies of viral genetic material (DNA). The presence of genetic material indicates that a virus is actively replicating.