

Liver Biopsy

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The liver biopsy is thought to be the best way to find out how damaged the liver has become from diseases such as hepatitis C. Liver biopsies are important for many reasons:

- To rule out any other liver diseases that a patient may have
- To stage and grade – find out how much the disease has damaged the liver
- To help make decisions about the best treatment
- To reassure both the patient and the doctor
- To provide a starting point to compare with future biopsies

This allows the doctor to see if the HCV is doing more damage or if treatment is needed.

Before the Procedure

Before the liver biopsy procedure, some blood tests will be taken to find out

how well the blood can clot. It is important that any drugs that could increase the risk of bleeding are stopped before the procedure. Your doctor or nurse will tell you how long you need to stop taking these drugs before and after the biopsy.

The Biopsy Procedure

A liver biopsy is usually done in a doctor's office or hospital as an out-patient procedure – does not usually require a hospital stay. The most common type of biopsy is done through the skin (percutaneous). Ultrasounds (using sound waves to make an image of the liver) are sometimes performed before or during the biopsy to figure out where the biopsy needle should be placed. Some people want to have a medication to calm them before the procedure to make the procedure more comfortable. Keep in mind that the patient must be awake during the procedure. This is done to avoid possible problems. There are three different types of needles used in a biopsy (suction needle, cutting needle and spring-loaded). The patient is given a shot to numb the area (similar to novacaine from the dentist) where the needle will be inserted. The biopsy itself takes very little time to do – usually only a couple of seconds.

The size of the sample of liver removed is a very, very tiny piece of the liver about one to one-and-a-half inches long.

Role of Liver Biopsy

Liver biopsies are performed for many reasons. Sometimes they are used to tell the type of problem or illness someone has. Other times they are used to tell if HCV medicines might help. Learning about other liver diseases is very important in the management and treatment of hepatitis C. Some illnesses that can be found only during a biopsy include:

- ❑ Deposits of iron (hemochromatosis)
- ❑ Hepatitis B (that has not been found in previous testing)
- ❑ Build up of fat in the liver (Nonalcoholic Steatosis)

Learning about these other liver diseases can change the treatment. The results of a biopsy can also tell us how likely it is that the treatment will work.

The most important thing the liver biopsy can do is find out if the liver is damaged. We know that the amount or number of HCV RNA (viral load) a patient has does not tell us how serious the liver damage might be. Testing ALT (alanine aminotransferase) levels is a frequent procedure on patients with hepatitis C, but this test is not a good way to determine the liver damage caused by HCV. In fact, about one-third of people with hepatitis C have normal ALT levels. Most people with normal ALT levels have some fibrosis (scarring of the liver), and their disease is not as bad as those with high ALT levels. Still, about 3 to 5 people out of a hundred with normal ALTs have cirrhosis (severe scarring of the liver).

After the biopsy is performed, a medical expert will review the results of the liver biopsy and issue a report that will list the amount of inflammation in the liver and if there is any scarring or damage to the liver.

There are other lab tests used to find out how bad the HCV liver disease is, but these tests are not as good at finding the liver damage as a biopsy. In addition, cirrhosis may not even be found if the biopsy is not performed.

Side Effects and Complications of a Liver Biopsy

The most common side effect of the biopsy is pain – only about one out of five people who have a biopsy have mild to moderate pain during and after the procedure. Few people have severe pain. There is also a small risk of bleeding.

Problems after the biopsy has been performed are another area of concern. These are not usually common. Only about 1-2% of patients need to go to the hospital as a result of the procedure. It is believed that only 1 in 10,000 to 1 in 12,000 people die as a result of complications from a liver biopsy.

Next Steps

It is also important to make sure the amount of liver damage is known. It is important to be able to tell how the disease will progress. Many people can figure out the approximate time they may have become infected with HCV by thinking about when they had things like blood transfusions or sharing works to inject drugs. Finding out how long you may have had HCV and knowing how much your disease has progressed is important. This information can help tell how active your disease will be in the future. For example, someone who has been infected for 20 years and has been found to have little or no damage to

the liver might think that the disease progression is slow. To find this out for sure, a patient can have biopsies every 3-5 years. On the other hand, if someone believes they have only been infected with HCV for 5 years and the biopsy shows more advanced damage or scarring, that person might want biopsies more often. This information can be a comfort to the patient and physician and is another tool used to manage HCV and keep people healthy.

Decisions about treatment can also be made from liver biopsy results. HCV treatments can have moderate to severe side effects. The liver biopsy can be a good tool for helping doctors and patients make good healthcare choices. This is very important for people infected with HCV genotype 1

since response rates are lower, ribavirin doses are higher, and treatment is longer for these patients compared to patients with genotypes 2 and 3.

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There is much research looking at various blood tests that can replace the biopsy in measuring the amount of inflammation and scarring of the liver. However, until these tests are more accurate, the liver biopsy is the standard of care in managing hepatitis C.
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