Information for Patients Undergoing Percutaneous Liver Biopsy

Department of Radiology

Introduction

This leaflet tells you about the procedure known as percutaneous liver biopsy, explains what is involved and what the possible risks are. It is not meant to replace informed discussion between you and your doctor but can act as a starting point for such a discussion. If you are having the biopsy done as a pre-planned procedure, then you should have plenty of time to discuss the situation with your consultant and the radiologist who will be doing the biopsy, and perhaps even your own GP. If you need the biopsy done as a relative emergency, and then there may be less time for discussion, but none the less **you should have had sufficient explanation before you sign the consent form.**

What is a percutaneous liver biopsy?

A liver biopsy is a common procedure when a small sample of liver tissue is removed using a needle using only a tiny incision, so that it can be examined under a microscope by a pathologist, an expert in making diagnoses from tissue samples. A liver biopsy is done to diagnose and monitor certain conditions of the liver. For example, cirrhosis, some metabolic liver disorders, or inflammation of the liver (hepatitis) which can be due to various causes.

Why do I need a percutaneous liver biopsy?

Other tests that you probably have had performed, such as an ultrasound scan or a CT scan, will have shown that there is an area of abnormal tissue inside your body. From the scan, it is not always possible to say exactly what the abnormality is due to, and the simplest way of finding out is by taking a tiny piece of it away for a pathologist to examine.

Who has made the decision?

The consultant in charge of your case, and the radiologist doing the biopsy will have discussed the situation, and feel that this is the best thing to do. However, you will also have the opportunity for your opinion to be considered, and if, after discussion with your doctors, you do not want the procedure carried out, and then you can decide against it.

Who will be doing the percutaneous biopsy?

- A specially trained doctor called a Radiologist. Radiologists have special expertise in using x-ray and scanning equipment, and also in interpreting the images produced. They need to look at these images while carrying out the biopsy.
- The Radiologist will need to know all medication that you are taking, including anti-platelet drugs and anticoagulants. These are medicines that affect the way your blood clots. Listed below are some drugs that the doctor will need to be informed about if you have been prescribed them.
- Warfarin, Aspirin, Enoxaparin, Dalteparin, Tinzaparin, Bemiparin, Fondaparinux, Danaparoid, Coumarins, Acenocoumarol, Phenindione, Lepirudin, Bivalirudin, Argatroban, Dabigatran, Rivaroxaban, Clopidogrel, Dipyridamole, GP IIb/IIIa inhibitors, Abciximab, Eptifibatide, Tirofiban and Plasugrel.
- The Radiologist will need to know if you have a hereditary bleeding abnormality or abnormal bleeding history after minor procedures such as dental extraction and further tests to asses your blood may be needed.

Where will the biopsy take place?

Generally in the x-ray department, either in the ultrasound room, or else a “special procedures” room, with an ultrasound machine. Occasionally, biopsies are performed in the CT scanning room.

How do I prepare for percutaneous biopsy?

You may need to be an in-patient in the hospital, although many biopsies can be performed as an outpatient. You will probably have had some blood tests performed beforehand, to check that you do not have an increased risk of bleeding. You will probably be asked not to eat for six hours beforehand, though you may be allowed to drink some water. You may receive a sedative to relieve anxiety. You will be asked to put on a hospital gown. If you have any allergies, you MUST let your doctor know. You will need to have a needle put into a vein in your arm, so that the radiologist can give you a sedative or painkillers, though this is rarely necessary.

What actually happens during a percutaneous biopsy?

You will lie on the ultrasound or scanning table, in the position that the radiologist has decided is most suitable. The radiologist will keep everything as sterile as possible, and may wear a theatre gown and operating gloves. Your skin will be cleaned with antiseptic, and you may have some of your body covered with a theatre towel. The radiologist will use the ultrasound machine or the CT scanner to decide on the most suitable point for inserting the biopsy needle. Then your skin

will be anaesthetised with local anaesthetic, and the biopsy needle inserted into the abnormal tissue.

While the first part of the procedure may seem to take a while, actually doing the biopsy does not take very long at all, and the needle may be in and out so quickly that you barely notice it.

Will it hurt?
When the local anaesthetic is injected, it will sting to start with, but this soon passes off, and the skin and deeper tissues should then feel numb. Later, you may be aware of the needle passing into your body, but this is generally done so quickly, that it does not cause any discomfort at all. There will be a nurse, or another member of clinical staff, standing next to you and looking after you.

If the procedure does become painful for you, then they will be able to arrange for you to have more painkillers through the needle in your arm.

How long will it take?
Every patient's situation is different, and it is not always easy to predict how complex or how straightforward the procedure will be. It may be over in 30 minutes, although you may be in the x-ray department for about an hour altogether.

What happens afterwards?
You will be taken back to your ward on a trolley. You will have to lie flat on the bed for 4 hours after the procedure. Nurses on the ward will carry out routine observations, such as taking your pulse and blood pressure to make sure that there are no problems. They will do this every 30 minutes for a minimum of 6 hours. You will generally stay in bed for a few hours, until you have recovered.

What happens next?
All being well, you will be allowed home either on the same day, or perhaps the next. Do not expect to get the result of the biopsy before you leave, the biopsy specimens take longer to prepare and the result may take at least 2 - 3 weeks.

Are there any risks or complications?
Complications are uncommon. In a small number of cases there is some bleeding from the biopsy site. This is usually minor, and soon stops. Occasionally, the bleeding is more severe, and rarely a blood transfusion may be required to deal with it. Very, very rarely, an operation or another radiological procedure is required to stop the bleeding. The main reason you are monitored for several hours after the biopsy is to check for bleeding.

A rare complication is for bile to leak from the liver internally. There is a small risk that the small wound will become infected after the biopsy.

There are other rarer complications that will be discussed with you when you are asked to sign a consent form for the procedure.

Unfortunately, not all biopsies are successful. This may be because, despite taking every possible care, the piece of tissue which has actually been obtained is normal tissue rather than abnormal. Alternatively, although abnormal tissue has been obtained, it may not be enough for the pathologist to make a definite diagnosis. The radiologist doing your biopsy may be able to give you some idea as to the chance of obtaining a satisfactory sample. Despite these possible complications, percutaneous biopsy is normally very safe, and is designed to save you from having a bigger procedure.

Finally...

Some of your questions should have been answered by this leaflet, but remember that this is only a starting point for discussion about your treatment with the doctors looking after you. **Make sure you are satisfied that you have received enough information about the procedure, before you sign the consent form.**
A copy of the consent form is enclosed.
Percutaneous liver biopsy is a very safe procedure, designed to save you having a larger operation. There are some slight risks and possible complications involved, but these are generally minor and do not happen very often.

For further information contact:-

Sister G. Kingsbury on:- 01873 - 732737
Radiology Department, Nevill Hall Hospital

Radiology Nurses on:- 01633 - 234327
Radiology Department, Royal Gwent Hospital

British Society of Interventional Radiology (BSIR) and the Clinical Radiology Patients' Liaison Group (CRPLG) of the Royal College of Radiologists.

Radiology Info.org - a link from the BSIR website.