Transplant Kidney Biopsy
Information for patients

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Introduction

This leaflet is about the procedure known as transplant kidney biopsy. Its aim is to explain what is involved and what the possible risks are. It is not intended to replace informed discussion between you and your doctor, but can act as a starting point for such a discussion.

If the biopsy is being performed as a pre-planned procedure, you should have plenty of time to discuss the situation with your consultant and the doctor who will be doing the biopsy. If you need the biopsy more urgently, there may be less time for discussion, but nonetheless, you should feel you have been given as much information and explanation as you need before you sign the consent form.

What is a transplant kidney biopsy?

There are many reasons why a transplanted kidney may not function as efficiently as it should. A simple ultrasound scan can detect some problems, but often a small piece of kidney tissue is needed for examination using a microscope. The procedure used to take the tissue sample out of you is called a transplant kidney biopsy and it is performed by inserting a special needle through the skin.

Who will be doing the biopsy?

A kidney specialist (Consultant) or a trainee kidney specialist (Specialist Registrar) will be responsible for carrying out the procedure. The doctor performing the biopsy may be different to the doctor who recommended the procedure to you, but they will be happy to answer your questions.

Where will the biopsy take place?

The biopsy will usually be done in the Minor Operations room in the Renal Unit at Southmead Hospital. The room has an ultrasound machine that will be used to determine the position
of the transplant kidney within your body. Occasionally the procedure is done while you are on a bed in the ward and the ultrasound machine is brought to the bedside.

**How do I prepare for biopsy?**

You will be admitted into one of the inpatient wards or to the Renal Day Case Unit. You will have some blood and swab tests performed to check that you do not have an increased risk of bleeding or infection. These might already have been done in an earlier visit to the outpatient department. You should inform the doctor if you are taking medication that prevents clotting of the blood such as warfarin, aspirin, dipyridamole or clopidogrel. **You should usually not have taken warfarin, aspirin or clopidogrel for 1 week before the biopsy (but the precise timing of when you should stop will be discussed with you, according to the reason for taking these drugs).** The biopsy is usually done under a local anaesthetic, so you will remain awake. You can eat and drink normally before and after the biopsy is done.

**What happens during the biopsy?**

You will be asked to lie on your back on the bed and an ultrasound scan will be used to decide on the most suitable point for insertion of the biopsy needle. The skin will be cleaned with antiseptic solution and covered with sterile towels. The skin and underlying tissues will be numbed with local anaesthetic, which is put in using an injection. This may sting a little as it goes in. A small incision (less than 1 cm) is made in the skin to allow passage of the biopsy needle. You may hear a clicking sound when the biopsy needle is activated. The doctor may need to take two or three samples to ensure enough tissue is obtained.

Once the biopsy is done, the injection site will be covered with a small dressing and you will return to the ward or Day Case Unit.
Will it hurt?

When the local anaesthetic is injected it will probably sting to start with, but this soon wears off and the skin and deeper tissues should then feel numb. You may be aware of the needle passing into your body, but this usually does not cause pain.

How long will it take?

Everyone’s situation is different and it is not easy to predict how straightforward or complex a procedure will be. Preparation for the biopsy might take several minutes, but the needle is in your body for a very short time. The whole procedure may be over in less than 30 minutes.

What happens after the biopsy?

Following the biopsy you will return to the ward or Day Case Unit where you will rest in bed for 6 hours. This involves 2-3 hours lying flat and then 3 hours sitting up. Your blood pressure and pulse will be measured frequently at first and then at longer intervals. During this time you should be able to eat and drink. When the local anaesthetic wears off, you may feel some pain at the needling site; please ask the nurse for a painkiller if you need it.

The first urine you pass after the biopsy should be given to the nurse to check if there is any bleeding. If all remains well, you may be allowed home on the same day as the biopsy, but you should be prepared to stay in hospital overnight.

You should avoid strenuous activity, heavy lifting or contact sports for 48 hours after the biopsy.

For urgent biopsies, preliminary results may be available within 24-48 hours. For less urgent biopsies, the full results will be available for discussion at your next clinic visit. Unfortunately, it is not possible to be certain that there is enough tissue to give a clear result until the pathologist has examined the biopsy, and occasionally the biopsy will need to be repeated later.
If you develop pain around the kidney or see any blood in your urine, you should contact us straight away for advice.

Are there any risks or complications?
As with any medical treatment, there are some risks or complications that can arise from transplant biopsy. Your doctor has recommended the procedure because the benefits of the information that the biopsy will provide outweigh the risks to you.

The type and approximate frequency of the main complications are shown below:

- In approximately 5 out of 100 transplant biopsies, there may be visible bleeding in the urine or discomfort due to bruising around the kidney. These problems usually settle on their own, although painkillers may be needed for a time.

- Rarely (fewer than 1 in 100 biopsies) there is more bleeding that requires a blood transfusion. If bleeding persists, additional scans may be required. In fewer than 1 in 1,500 biopsies, the bleeding may continue and require urgent X-ray tests; a more complex radiological procedure may then be needed to identify the cause of the bleeding and to stop it. This involves X-ray doctors passing a catheter through the blood vessel in your groin, advancing this up to your kidney blood vessels to identify the bleeding vessel and then injecting some glue-like material to plug the bleeding point. This procedure is known as ‘embolisation’.

- Extremely rarely (fewer than 1 in 3,000 biopsies) bleeding may be difficult to control or there may be damage to another organ. Under these circumstances, an urgent operation and even removal of the kidney might be needed. Although deaths have occurred following complications of biopsies, this is extremely rare.
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 doctors looking after you.

If you agree to have the biopsy, you will be asked to sign the hospital’s consent form which will state that you have received information about the procedure and have discussed it with your doctor.

**Make sure that you feel satisfied that you have received enough information about the procedure before you sign the consent form.**
References


The National Kidney Federation
www.kidney.org.uk/

NHS Constitution. Information on your rights and responsibilities. Available at www.nhs.uk/aboutnhs/constitution
If you or the individual you are caring for need support reading this leaflet please ask a member of staff for advice.

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