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Having X-ray guided treatment to block the blood supply to a kidney angiomyolipoma (a type of non-cancerous kidney tumour)

Department of Radiology

Information for Patients

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Introduction

If you are an outpatient please read your appointment letter carefully to check which hospital your appointment is at. This leaflet tells you about your procedure which is an X-ray guided treatment of an angiomyolipoma (a type of non-cancerous tumour) in your kidney. Non-cancerous tumours do not spread to other parts of the body. Please read it carefully as it contains important information and instructions.

What is a kidney angiomyolipoma (kidney AML)?

You say angiomyolipoma like this: ann-gee-oh-my-oh-ly-poh-ma

A kidney (renal) angiomyolipoma (AML) is a growth (tumour) in the kidney that has blood vessels, muscle and fat.

Less than 3 in 100 people get a renal AML.

Women are 4 times more likely than men to get a renal AML.

People who have a genetic condition called tuberous sclerosis are more likely to get a renal AML than people without tuberous sclerosis.

What symptoms can renal AMLs cause?

Small AMLs (less than 4cm) do not usually cause symptoms. Larger AMLs, more than 4cm in size, are more likely to cause symptoms.

The symptoms can be very mild to very serious.

The symptoms can include:

- Bleeding into the tummy (abdomen) and pelvis that could be serious and life threatening

- New pain in the back or sides of the tummy (abdomen)
- Blood in your pee (urine) which can be visible or only visible under microscope or found on a urine test
- Weight loss
- High blood pressure (hypertension)
- Feeling sick or being sick (nausea and vomiting)

How can a renal AML be treated?

Your urologist or medical doctor has probably talked to you about the options. The options include:

- **Blocking the blood supply (also called embolisation).** A doctor who specialises in radiology treatments (interventional radiologist) injects a special substance to block the blood supply to the tumour in the kidney while saving the blood supply to the rest of the kidney.
- **Heat treatment or freezing (thermoablation).** A probe is inserted directly into the tumour in the kidney. The tumour is either heated to a high temperature or cooled to a temperature below freezing. The procedure destroys the tumour but does not damage the kidney.
- **An operation (surgery).** A doctor who specialises in kidneys and bladders (urologist) takes out the tumour and at least part of your kidney. The size of the tumour, where it is in the kidney and how well your kidneys are working help doctors decide if the whole kidney needs to be taken out.
- **Do nothing.** If the tumour is less than 4cm and it is not causing you problems, the option is for you to have either CT scans or MRI scans every 6 months to a year.

Embolisation is the option often used for patients with angiomyolipomas that are causing symptoms.

What are the potential benefits of blocking the blood supply using embolisation?

The benefits of the embolisation include:

- It is a procedure that usually only needs you to stay in hospital for 1 night.
- You can return to work within 5 to 7 days.
- It lowers the risk of your AML bleeding.
- It keeps the rest of the kidney undamaged.
- Studies have shown that embolisation can control the growth of an AML for at least 5 to 10 years.

Asking for your permission (consent)

The doctor who referred you should have talked to you about the reasons for this procedure and any other options.

You have been referred to a Radiologist for this procedure. Radiologists are doctors who have specialised in imaging and X-ray treatments. They will confirm that you understand why the procedure is being done, its potential risks and what the chances of success are. You will then be asked to sign a consent form to confirm this. **You should feel that you have had enough explanation before you sign the consent form.**

If after talking to the hospital doctor or Radiologist you do not want to have the procedure then you can decide against it at any time.

If the Radiologist feels that your condition has changed they will talk to you about whether the procedure is still needed. They may then ask you to return to your referring doctor for review.

If you feel during the procedure that you do not want it to continue we will explain the implications of not doing so to help you fully decide.

Important information about blood thinning medication:

If you are taking medication that thins the blood (anticoagulants or antiplatelets) it may need to be stopped or replaced with a different one for a few days.

Common examples of these drugs include aspirin, warfarin, clopidogrel (Plavix®), apixiban (Eliquis), rivaroxaban (Xarelto), ticagrelor (Brilinta), Dalteparin and Heparin.

Please call the radiology department for advice by phoning the number on your appointment letter as soon as possible.

You will be asked what blood thinning medication you are taking, how much you take (the dose), and what you are taking it for.

You may have already been given instructions on blood thinners by the doctor who referred your for this procedure. Please still call the radiology department so we can check this.

Important information before you have X-rays or X-ray contrast liquid:

The contrast liquid used in this treatment contains iodine and is cleared by the kidneys in your wee (urine) or at your routine dialysis if you have dialysis.

Please tell the X-ray staff when you arrive if:

- **You are allergic to iodine or rubber (latex)**, have any other allergies or have asthma.
- **You have reacted previously to an intravenous contrast liquid**, the dye used for kidney X-rays and CT scanning and X-rays of your heart and blood vessels.
- **You are on renal dialysis or have any problems with your kidneys**.
- **You have diabetes.**
- **There is any possibility that you may be pregnant.**

Some patients get a warm feeling and a metallic taste when the injection is given and sometimes may feel sick. If you do get these feelings they usually last about 1 minute. Please let the staff who are with you know if you get these feelings. Some patients will also have the feeling that they are passing urine but they are not actually doing so. This is also normal.

How do I get ready for the procedure?

A CT scan of your tummy may be needed to help plan the embolisation procedure. You will be told if you need a CT scan.

You will have a pre-assessment appointment. This appointment is to make sure that everything is suitable and ready for the procedure. Some of this may be done by a phone call.

The pre-assessment appointment may include:

- Talking about the procedure with one of the interventional radiology doctors or nurses.
- Talking about your medical history and any medications that you take.
- A physical examination. This involves examining your tummy and checking your heart rate and blood pressure. If your pre-assessment appointment is over the phone the physical examination will happen when you come for the procedure.
- Having swabs to check for infections and blood tests to make sure that you do not have an increased risk of bleeding. If you need either of these doing and your pre-assessment appointment is on the phone we will send you the forms and instructions on how to get these done.
- Signing a consent form for you to give permission to have the procedure.

Can I eat and drink before the procedure?

- Do not eat any solid food after 12 midnight, the night before the procedure.
- You can have water on the morning of the procedure.

How long will the embolisation take?

The procedure usually takes about 2 to 3 hours.

Who will be doing the procedure?

A doctor who specialises in imaging and X-ray treatments (an interventional radiologist) will do the procedure.

There will also be a scrub assistant, nurse, a radiographer and possibly a registrar in the room.

As we are a teaching hospital a nurse or radiographer student may also be present. If you wish, you may ask that a student is not present during your examination.

How long will I be in the hospital?

Most patients are in the hospital for about 1 day and night.

You will come to the hospital on the day of the procedure.

You can expect to go home in the late morning or early afternoon the day after the procedure.

What happens during the procedure?

- When you get to the radiology department you will be asked to change into a hospital gown.
- A thin tube called a cannula will be put into a vein in your arm or the back of your hand. This is so that you can be given medication if needed. This may include a sedative to help you feel more relaxed and pain killers if needed.
- You will be taken to an interventional X-ray room for the procedure. You will lie on the X-ray table flat on your back.
- You will be attached to a blood pressure monitoring machine and have a small monitoring device (peg) attached to your finger to check your heart rate (pulse).

- Everything will be kept clean (sterile). Your skin between the top of the legs and lower tummy (groins) will be cleaned with antiseptic and you will have some of your body covered with sterile sheets.
- The skin and deeper tissues over the blood vessels will be numbed with local anaesthetic. When the local anaesthetic is injected it will sting to start with, but this soon wears off and the skin and deeper tissues should then feel numb. If the procedure does become uncomfortable you should tell the member of staff who will be with you throughout the procedure.
- A small needle will be put into an artery in your groin.
- A thin tube called a catheter will then be put into the artery and slowly pushed up to the kidney.
- Contrast liquid that shows up on X-ray pictures will be injected through the catheter so the doctor can see the arteries and the AML in your kidney.
- When the AML has been found, tiny plastic particles will be injected into the artery supplying the AML. These particles will block the blood supply to the AML.
- At the end of the procedure, the catheter in your groin will be removed and the doctor or a nurse will press firmly on the skin entry point to prevent any bleeding and bruising. Sometimes a closure device is used to help seal the artery. If a closure device is used it will be explained to you at the time.

What happens after the procedure?

- First you will be taken to the radiology recovery room. Nurses will carry out routine checks, such as taking your pulse and blood pressure, to make sure that there are no problems. They will also look at the skin entry point to make sure there is no bleeding from it.
- You will then be taken back to your ward. Nurses will continue to carry out routine checks.
- You will need to stay in bed for 2 to 6 hours after the procedure: you will be told at the end of the procedure how long you must rest in bed. After that time, you can get out of bed, but you should take it easy.
- Some patients have moderate to severe pain in back or the side of the tummy and feel sick after the procedure. Tell the staff looking after you if you have any pain or feel sick. They can give your medicine through your cannula if needed. The pain usually gets better over the next 2 days.
- Some patients get extreme pain after the procedure. If this happens you will be given pain relief. It is called patient controlled analgesia. This allows you to have control over your pain by allowing you to give yourself extra medicine when it hurts.
- Some patients will need to stay in the hospital overnight. This will be decided once your procedure is done.

How do I get the results?

The results will not be given to you immediately. Your pictures will be looked at again by the interventional radiologist. The results will be sent to the consultant or GP who referred you for this procedure.

An explanation of how to get your results will be given to you after your examination.

What happens when I go home?

You may have “flu-like’ symptoms for 5 to 7 days after the procedure.

Symptoms can include:

- mild raised temperature (fever)
- feeling sick
- aching and pain
- tiredness

Rest and taking the prescribed painkillers or your usual painkillers usually helps. Most patients are able go back to doing light work within 5 to 7 days.

Do not drive for 48 hours (2 days) after the procedure

You will need someone to drive you home.

If you had sedation please follow the advice below.

- **For 12 hours**: you must have another adult with you

For 24 hours:

- Do not ride a bicycle.
- Do not drink alcohol.
- Do not operate any machinery or do anything needing skill or judgement.
- Do not make important decisions or sign any documents.
- Do not climb ladders.
- Do not return to work until after this period of time.
- Do not take any strenuous exercise or heavy lifting.

When can I go back to work?

You should be able to go back to normal activities within 1 week.

What are the risks from radiation in this procedure?

The main risk from having X-rays is an increase in the risk of getting a cancer in the future. This risk is thought to be very small. We are all exposed to natural background radiation every day of our lives. This comes from the sun, food we eat, and the ground. Each examination gives a dose on top of this natural background radiation. The risks of radiation are slightly higher for an unborn child so we must ask some patients aged 10 to 55 years about their periods and possibility of being pregnant.

The benefits of this examination are likely to outweigh any potential risk and the risk from not having the examination could be greater. We will take all safeguards to minimise the amount of X-rays you receive.

Are there any risks?

As with any procedure or operation, complications are possible. We have included the most common risks and complications in this leaflet, although they are different for each person. Your risks will be discussed with you before you sign the consent form.

- **Bleeding** from the puncture site where the small tube is inserted. If there is any bleeding it is usually easily stopped. The risk of a larger amount of bleeding happening is less than 1 in 100 people (1%).
- **Allergic reaction** to a medication used during the procedure.
- **Reaction to contrast liquid** - Some patients may be allergic to the contrast liquid and may have symptoms such as feeling or being sick (nausea or vomiting), or a rash. Any side effects usually happen within 20 minutes. If you develop any of these symptoms at home you should contact your GP or call 111.
- **Infection** in the area treated which can cause an abscess or fluid collection. This could need another procedure to put a drainage tube in your kidney to help with the healing. This happens in less than 3 in 100 people.
- **Kidney failure** - this can happen if the tumour is so big that embolisation damages the blood flow to the entire kidney. This can cause the kidney to stop working. If your other kidney is working well, then this should not cause problems. If you other kidney is not working there is a risk you could need dialysis treatment.
- **Having the kidney taken out (nephrectomy)** - there is a risk of damage to the kidney that would need an operation to correct. The risk of needing to have the kidney taken out (nephrectomy) is less than 1 in 100 people (1%).

Contact details:

If you have any questions or concerns, or cannot make the appointment please call the radiology department on 0116 258 8765 and select option 7. Monday to Friday 9am to 5pm.

اگر آپ کو یہ معلومات کسی اور زبان میں درکار ہیں، تو براہِ کرم مندرجہ ذیل نمبر پر ٹیلی فون کریں۔
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Previous reference:

If you would like this information in another language or format such as EasyRead or Braille, please telephone 0116 250 2959 or email equality@uhl-tr.nhs.uk

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