

Radiology Department

Renal Angiography Information Leaflet (including Angioplasty, Stenting and Embolisation)

Introduction

You have been advised by your hospital consultant that you need to have a Renal angiogram that may or may not include a renal angioplasty, stent insertion or embolisation treatment. This information tells you about having any or all of these procedures. It explains what is involved and what the possible risks are.

This leaflet may not answer all your questions, so if you have any concerns, please ask the ward staff. If you feel unhappy with any part of your care within the X-ray Department please ask to speak to the Superintendent Radiographer.

Please read this leaflet carefully to ensure you are successfully prepared for the examination.

Please contact the X-ray Department if your weight is equal to or more than 205Kg (32 stone) you may require an alternative examination.

Points to Remember

- Please bring any sprays or inhalers that you are taking with you to the X-ray Department.
- We also ask you to leave any valuable possessions on the ward.
- If you are taking Aspirin or Warfarin please inform the ward staff, as this medication may need to be stopped prior to the procedure.

What is a Renal Angiogram?

A renal angiogram is a procedure to obtain images of blood vessels to the kidney. It involves the insertion of a catheter (a small plastic tube) into an artery, usually in your groin, manipulation of the catheter along the main artery of the body (aorta) to reach the arteries supplying the kidney and then injection of some contrast medium '**X-ray dye**'. The examination will be performed by a radiologist who will be assisted by a radiographer and a radiology nurse. It is not easy to predict how long the procedure could take. As a guide, expect to be in the Radiology Department for at least one hour.



Patient Information

If it is required, appropriate and possible, the radiologist will proceed on to an angioplasty or embolisation. It may however be necessary to arrange this at a later date; the radiologist will discuss this with you at the time.

What is an angioplasty or stent insertion?

Angioplasty is a procedure in which a small balloon on the end of a catheter is inflated to re-open a narrowed or blocked artery that has been identified during the angiogram. This technique means that surgery may be avoided in many cases.

In order to perform the angioplasty a slightly larger catheter is used, which slightly increases the risk of bleeding afterwards. You may feel the doctor changing and moving catheters in and out of your groin artery. Although this is sometimes slightly uncomfortable, it should not be painful. Sometimes, it will be necessary to insert a special device called a stent to keep the artery open. This is a small metal cage that expands in your artery to keep the vessel open and allow more blood to flow through. If this is necessary, the radiologist will discuss this with you at the time.

Why do I need an angioplasty done or a stent inserted?

This is done if there is a narrowing or blockage in one or more of your arteries, usually caused by atherosclerosis, more often known as “hardening of the arteries”.

Atherosclerosis is caused by a build-up of fatty deposits on the inside of the arteries. This narrows the hole down the middle of the artery, leaving a smaller space in which the blood may flow, reducing the amount of blood circulating through that section of artery. Arteries carry blood containing oxygen away from the heart, to feed the organs and tissues around the body.

If the angiogram has shown the location and extent of the atherosclerosis in your artery, the angioplasty should re-open the narrowing however a stent may be necessary to keep the artery open.

What is renal embolisation?

A Renal embolisation is when the blood supply to one of your kidneys is purposely stopped. Once the radiologist has localised your renal artery from the angiogram, small metal coils are inserted down the catheter and left in the artery. Over time blood clots will form around these coils blocking the blood supply to your kidney.

Why do I need a renal embolisation?

The procedure is usually done prior to surgery to minimise bleeding and reduce the risk of complications during surgery.

Referral and Consent

If you are having the Renal angiogram / angioplasty or embolisation as a planned procedure, then you should have plenty of time to discuss the situation with your consultant and the radiologist (a specialised X-ray doctor) who will be performing the procedure. **You should have had sufficient explanation before you sign the consent form.** If after discussion with your hospital doctor or radiologist you do not want the procedure carried out, then you can decide against it.

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If the radiologist feels that your condition has changed or that your symptoms do not indicate such a procedure is necessary then they will explain this to you. They will communicate their reasons with the referring clinician and ask that you return to your referring clinician or ward for review. At all times the radiologist and referring clinician will be acting in your best interests.

Before the test

- Please bring all your usual medication into hospital with you.
- Please remember to take any sprays or inhalers with you when you have the procedure.
- It is important that you understand the test and its implications, so if you have any questions, please ask the doctor.
- You will be asked to sign a pink consent form confirming that you understand the procedure and are aware of the risks and benefits it entails. This will be done on the ward before you have the procedure done.

We will want you to be as relaxed as possible for the procedure.

Take all medication as normal, but if you are taking water tablets or diuretics you may stop this on the day of the procedure.

Please tell the doctor if:

- You have had any allergies or bad reactions to drugs or other tests,
- You have asthma, hay fever, diabetes, or any heart or kidney problems.
- If you are taking Metformin please inform the ward staff as this **may** have to be stopped for 48 hours after the procedure.

Preparation

- You will have had some blood tests to check your blood clotting ability and kidney function.
- Unless you have planned surgery on the same day there is no need for you to stop eating and drinking before the procedure. It is important that you drink plenty, **we advise one pint (500mls) of water or squash above your normal fluid intake.** (If your surgery is on the same day the ward will advise on when you should stop eating and drinking.)
- **Important information for patients on a fluid restricted allowance:** If you are under the care of a renal specialist and or have to follow a fluid restricted diet, you should include this preparation as part of your fluid allowance.
- If you have severe kidney problems you will be put on intravenous fluids (a drip) for 6 hours, starting the hour before the procedure.
- If you are taking **Metformin** please inform the ward staff as this **may** have to be stopped for 48 hours after the procedure.

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- Some pain killers (Non Steroid Anti-Inflammatory Drugs) **may** have to be stopped on the day of the examination for 24 hours, please discuss this with the nurses on the ward. Paracetamol may be used instead.
- Before the examination a cannula will be inserted into a vein in your arm.
- You will need to wear a hospital gown. The porters will collect you from the ward and take you to the X-ray Department on your bed for the procedure.

During your examination

- The procedure will be again explained to you by the radiologist and you will be able to ask any further questions that you may have.
- You will be taken into the X-ray room where you will be asked to lie down on your back on the X-ray table.
- Your blood pressure will be monitored by a radiology nurse who will stay with you throughout the procedure.
- The interventional radiologist (a specialised X-ray doctor) will inject a local anaesthetic into the skin of your groin to freeze the area.
- You may still feel some pressure sensation, but if you feel any pain during the procedure inform the radiologist. You will be asked to lie as still as you can.
- The catheter is then inserted into the artery at the groin, and using x-rays to help the radiologist moves the catheter into the correct position. X-ray pictures are taken whilst the dye is injected down the catheter into the arteries. Sometimes the injection may cause a hot feeling for a short while or the feeling that you have passed urine.
- At this point the angioplasty or embolisation treatment will be performed if necessary.
- At the end of the procedure, the catheter is withdrawn and the radiologist then presses firmly on the skin entry point for several minutes, to prevent any bleeding. Alternatively the radiologist may insert a small stitch (arterial closure device) into the puncture site to prevent bleeding.

Risks/benefits of Procedure

As with any procedure or operation, complications are possible. We have included the most common risks and complications in this leaflet. The probability of these complications occurring will vary for each patient and the possibility of these complications happening to you will be discussed with you before you sign the consent form.

- There can be bleeding after the procedure. The ward nurses will monitor you closely for 4 – 6 hours after the procedure. Rarely the bleeding can be so severe that serious complications can arise. The doctor will discuss these with you when you sign the consent form.
- Rarely the contrast medium used for angiograms can cause deterioration in kidney function, which is usually only temporary but occasionally can be more long term. This is of particular concern for people who already have impaired kidney function. You will have a blood test to assess your kidney function prior to the procedure.

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- Rarely, allergic reactions can occur with the x-ray dye, only very rarely requiring any treatment. You will be asked about allergies by the radiologist at the time.

Despite these possible complications, the procedure is normally very safe. At all times during and after the procedure the staff will be monitoring your responses to this treatment in order to minimize the effects of any complications.

X-rays are a type of radiation. We are all exposed to natural background radiation every day of our lives; this comes from the sun, food we eat, and the ground. Exposure to X-rays carries a small risk, but your doctor feels that this risk is outweighed by the benefits of having the test. We will take all safeguards to minimise the amount of X-rays you receive.

Safety

The contrast agent contains iodine and is excreted by the kidneys in your urine. Please inform the radiologist or radiographer:

- If you are allergic to iodine, have any other allergies or suffer from asthma.
- If you have reacted previously to the injection used for kidney X-rays or CT scanning.
- If you have known kidney problems.

Female patients aged 10 – 60 years: the risks of radiation are higher for the unborn child so you will be asked to confirm that you are not pregnant before the examination can proceed.

After your examination

- You should be offered a drink in the radiology department following your procedure if you are not going for surgery on the same day.
- You will be taken back to the ward for observations for 4 hours following the procedure. If a stitch was used to close the artery then you must lay flat for the first 45 minutes. You may then sit up after 90 minutes and following this you will be allowed to move around gently.
- If a stitch was not used then you will be asked to remain lying flat for 4 hours so your groin does not start to bleed. It is important that you do not try to sit up or get out of bed. You can then sit up gradually after 4 hours.
- Please ensure you have drunk at least 1 pint (1/2 litre) of water on the ward within the 2 hours following the procedure.
- Important information for patients with renal impairment: You will be kept on intravenous fluids for the remainder of the six hours. You should have a further kidney function test before you are discharged home from the ward. You may require special monitoring and referral to a renal specialist if your kidney function has decreased by 10%.
- If you have any problems after the procedure please speak to staff on the ward.

Patient Information

Other Sources of Information:

For general information about radiology departments visit the Royal College of Radiologists website: www.goingfora.com

For information about the effects of X-rays read the NRPB publication: "X-rays how safe are they?" on the Health Protection Agency website: www.hpa.org.uk

Please note that the views expressed in these websites do not necessarily reflect the views of UHCW NHS Trust or the NHS.

To speak to a member of staff, you can contact the Radiology Department via telephone on 024 7696 6300.

The Trust has access to interpreting and translation services. If you need this information in another language or format please contact the number on your appointment letter and we will do our best to meet your needs.

The Trust operates a smoke free policy

Document History

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