Wrightington, Wigan and Leigh Teaching Hospitals
NHS Foundation Trust

Undergoing Peripheral Angiography (Angiogram)

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Patient Information

X-Ray Department

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Introduction

This leaflet tells you about the procedure known as peripheral angiography or an angiogram. It explains what is involved and what the possible risks are. It is not meant to replace an informed discussion between you and your doctor, however it can act as a starting point for such a discussion.

As you are having a pre-planned angiogram, you should have had sufficient explanation before you sign the consent form.

The Radiology Department may also be called the X-ray or Imaging department. It is the facility in the hospital where Radiological examinations of patients are carried out, using a range of X-ray equipment, such as a computed tomography (CT) scanner, an ultrasound machine and a magnetic resonance (MR) imaging scanner.

Radiologists are doctors specially trained to interpret the images and carry out more complex examinations. They are supported by Radiographers who are highly trained to carry out X-rays and other imaging procedures.

What is a peripheral angiogram?

An angiogram is a procedure where X-rays are used to examine arteries. Normally, arteries do not show up on an ordinary X-ray, so a special dye, called contrast, is injected into the artery through a fine plastic tube called a catheter. X-rays are then taken immediately afterwards, producing detailed images of the arteries.

Why do I need a peripheral angiogram?

Your doctor needs detailed images of the arteries to determine the most appropriate treatment for you. Peripheral angiograms are commonly performed to investigate blockages in the arteries of the legs.

Who has made the decision?

The Vascular Surgeon and the Radiologist will have discussed the situation and feel that this is the best option. 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, you can decide against it.

Who will be doing the angiogram?

A Radiologist, who specialises in vascular intervention.These Radiologists have special expertise in using x-ray equipment, and interpreting the images produced. They will look at these images while carrying out the procedure. Radiology Nurses and Radiographers will assist the Radiologist during the procedure.

Where will the procedure take place?

The procedure will take place in the X-ray Department, in a room adapted for specialised procedures. This is usually a day-case procedure.

How do I prepare for the angiogram?

You will be asked to attend a preoperative assessment approximately 1-2 weeks before your procedure. This is where we can gain more information about you, discuss your medication and answer your questions.

You will be advised to continue taking your normal medication, even on the morning of your admission, that is unless they belong to one of the groups of medication listed below:

1. Diuretics or "water tablets" - if your angiogram is scheduled for the morning, it may be better if you leave them till after the angiogram.
2. Anticoagulants (Warfarin / Apixaban / Rivaroxaban / Edoxaban).
3. Diabetic medications (Insulin injections or diabetic tablets).

You will be given instructions about the above medications at your preoperative assessment appointment.

On the day of the procedure,

- you will have been asked to fast, usually from midnight the previous night
- you will be asked to put on a hospital gown
- a small tube called a cannula will be inserted into your arm and a blood sample will be

taken

If you have any allergies, you **MUST** let your doctor know. If you have previously reacted to intravenous contrast (the dye used for tests like CT scans), you must also tell your doctor about this.

What happens during an angiogram?

You will lie on the x-ray table, generally flat on your back. During your procedure, a Radiology Nurse will place stickers on your chest and connect you to an electrocardiogram (ECG) machine (heart monitor). Your blood pressure will be checked every ten minutes and your pulse and oxygen levels will be continuously monitored throughout the procedure.

The Radiologist will wear a sterile theatre gown and gloves. The procedure is generally carried out using the big artery in the groin. The skin in your groin will be cleaned with antiseptic and then you will be covered with a large theatre towel.

The deeper tissues over the artery will also be anaesthetised with the local anaesthetic, a needle will then be inserted into the artery. Once the Radiologist is satisfied that this is correctly positioned, a guide wire is placed through the needle and into the artery. The needle is then withdrawn, allowing a fine plastic tube called a catheter to be placed over the wire and into the artery.

The Radiologist uses the X-ray equipment to make sure that the catheter and the wire are moved into the correct position, and then the wire is withdrawn. Contrast dye is then injected through the catheter and X-rays are taken.

The Radiologist may see a narrowing or blockage within an artery that is suitable for balloon angioplasty. A separate information leaflet is enclosed with this one; this gives you more information about angioplasty.

In certain cases, it may be possible to perform the balloon angioplasty whilst you are still on the X-ray table. This option will have been discussed with you during the consenting procedure.

Once the Radiologist is satisfied that the X-rays show all the information required, the catheter will be removed. A sealing device called an Angioseal may be placed in the artery at the puncture site to close the small arterial opening. With this in place, you can start moving about approximately 30 minutes after completion of the procedure.

Will it hurt?

Some discomfort may be felt in the skin and deeper tissues during the injection of the local anaesthetic. After this, the procedure should not be painful. There will be a Radiology Nurse or another member of clinical staff standing nearby looking after you.

You will be awake during the procedure and be able to tell the staff if you feel any pain or become uncomfortable in any other way.

As the contrast passes around your body you may get a warm feeling; some people can find this a little unpleasant; however, this feeling soon passes.

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. As a guide, expect to be in the X-ray Department for at least two hours.

What happens afterwards?

You will be taken back to the day case unit, usually the Surgical Admission Lounge (SAL), on a trolley. 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 also look at the skin entry point to make sure there is no bleeding from it. You will stay flat for 30 minutes and after that you can walk about. The usual recovery time is 4 hours then you can go home. You MUST have someone at home with you overnight as a precaution.

Are there any risks or complications?

Angiography is a safe procedure, but there are some risks and complications that can arise. There may be a small bruise around the site where the needle has been inserted; this is quite normal. There is a chance that the bruise may become very large and uncomfortable, but this does not happen very often. Very rarely, a large bruise is treated by having a small operation to drain it.

There is a risk of infection and if this occurs, it will require treatment with antibiotics.

As with any mechanical device there is also a small possibility that the catheter and / or Angioseal may fail to work properly. This may require you to stay overnight in the hospital or require transfer to the Vascular Unit at the Royal Preston Hospital.

Despite these possible complications, the procedure is normally very safe and is carried out with no significant side effects at all.

When will I get the results?

A written report on the findings of your angiogram will be sent to your referring doctor.

Safety

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

Information for patients between the ages of 12 and 55

The risks of radiation are slightly higher for an unborn child so you will be asked to confirm that you are not pregnant before the examination can proceed.

This applies to all patients whether you are male or female.

If there is a chance you may be pregnant, please let a member of staff know at the earliest opportunity or contact the Interventional Radiology Team on 0300 700 8713 (this is the direct phone number for Interventional Radiology where your procedure will be performed).

Finally

Some of your questions should have been answered by this leaflet; 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.

Contact

The X-Ray Department can be contacted directly on 0300 700 8713, or via the hospital switchboard on 0300 700 4000 and ask for the X-Ray Department.

Acknowledgements

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This leaflet has been prepared by the British Society of Interventional Radiology (BSIR) and the Clinical Radiology Patients' Liaison Group (CRPLG) of The Royal College of Radiologists. Approved by Board of the Faculty of Clinical Radiology the Royal College of Radiologists, 25th February 2020.



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