

Undergoing Arch and Carotid Angiography (Angiogram) or Arteriography (Arteriogram)

Patient Information

X-Ray Department

Author ID: DB
Leaflet Ref: X-Ray 003
Version: 8
Leaflet title: Undergoing Arch and Carotid Angiography (Angiogram)
or Arteriography (Arteriogram)
Last review: April 2021
Expiry Date: April 2023

Introduction

This leaflet tells you about the procedure known as an angiogram, (or arteriogram). It 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.

Whether you are having a pre-planned angiogram or as an emergency procedure, you should have 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 CT (computed tomography) scanner, an ultrasound machine and a MRI (magnetic resonance 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 an angiogram?

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

Why do I need an angiogram?

The reason you may require an angiogram is that there may be a problem with your circulation.

Who has made the decision?

The consultant in charge of your case and the radiologist doing the angiogram believe this is the next step. However, you will also have the opportunity for your opinion to be taken into account, 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 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 will look at these images while carrying out 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.

How do I prepare for an angiogram?

Firstly, you will attend a pre-op assessment where we can gain more information about you and discuss medication and answer your questions.

On the day of the procedure, you will be asked to put on a hospital gown. The procedure is generally carried out using the big artery in the groin.

If you have any allergies, you **MUST** let your doctor know. If you have previously reacted to intravenous contrast medium (the dye used for kidney x-rays and 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, the nurse will monitor your blood pressure, pulse, oxygen levels and heart rate.

The radiologist will keep everything as sterile as possible, and will wear a theatre gown and operating gloves. The skin near the point of insertion, probably the groin, will be cleaned with antiseptic, and then the rest of your body will be covered with a theatre towel.

The skin and deeper tissues over the artery will be anaesthetised with local anaesthetic, and then a needle will 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. Then the needle is 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 right position, and then the wire is withdrawn. A special dye, contrast medium, is then injected through the catheter and x-rays are taken.

Once the radiologist is satisfied that the x-rays show all the information required, the catheter will be removed. A seal (Angioseal) is then normally placed in the artery at the puncture site to close the small arterial opening. With this in place, you can start mobilising approximately 1 hour 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 nurse, or another member of clinical staff, standing nearby looking after you.

As the dye, or contrast medium, passes around your body, you may get a warm feeling, which some people can find a little unpleasant.

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. Depending on the location of the procedure, for

example, if looking at a large artery in the leg, this could take half an hour; if looking at smaller arteries it may be more complex and take longer possibly up to an hour. As a guide expect to be in the x-ray room for two hours altogether.

What happens afterwards?

You will be taken back to a day-case ward 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 then sit up. 30 minutes after that, you can walk about. The usual recovery time is 4 hours and then you can go home. You **MUST** ensure you have someone at home with you overnight as a precaution.

Are there any risks of having an arch or carotid angiogram?

An arch angiogram is a safe investigation and dozens of these are performed every day throughout the UK. Complications arising during or after an arch angiogram are uncommon and occur in less than 1 in 100 (i.e. in less than 1%) of examinations. In addition most of these are minor and require no additional treatment.

The most common problem occurs at the puncture site where you may be left with a bruise under the skin near where the nick was made. This should disappear in a few days to a week. Other much rarer complications include; damage to the wall of or blockage of the blood vessel. If a selective carotid angiogram has to be performed there is a small additional risk of approximately 1% of a mini stroke or TIA. This must be balanced against the reason for the angiogram, which is to assess the severity of the narrowing in your neck vessels so that your consultant surgeon can decide if an operation on the relevant neck vessel can reduce your risk of a major stroke or repeated TIA's.

A few patients might become ill or develop a reaction to the x-ray contrast or other drugs given during the procedure. This is slightly more likely if you have a severe allergic tendency, severe asthma, unstable diabetes, kidney problems or a condition called multiple myeloma. If you have any of the above conditions, you **MUST** ring the x-ray department for further information or advice.

As with any mechanical device, there is also the possibility the catheter and/or Angioseal may fail. Despite these possible complications, the procedure is normally very safe, and is carried out with no significant side effects at all.

When will you get the results?

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

I am on regular medication. Do I have to stop them before I come into hospital?

You should continue taking your medication even on the morning of your admission, 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 you return to the ward after the angiogram. If your angiogram is scheduled for the afternoon, you can continue with your water tablets or diuretics as normal.

2. Anticoagulants (warfarin).

3. Diabetic medication (insulin injections or diabetic medication tablets)

You will be given instructions on the above at your pre-op appointment.

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.

Contact

The X-Ray Department can be contacted directly on (01942) 778720, (01942) 822397 or via the hospital switchboard on (01942) 244000 and ask for the X-Ray Department

Acknowledgements

Wrightington, Wigan and Leigh NHS foundation Trust acknowledges The Royal College of Radiologists as the original authors of this leaflet.

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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.

Board of the Faculty of Clinical Radiology.

Comments, Compliments or Complaints

The Patient Relations/Patient Advice and Liaison Service (PALS) Department provides confidential on the spot advice, information and support to patients, relatives, friends and carers.

Contact Us

Tel: 01942 822376 (Monday to Friday 9am to 4pm)

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Ask 3 Questions

Become more involved in decisions about your healthcare. You may be asked to make choices about your treatment. To begin with, try to make sure you get the answers to three key questions:

1. What are my options?
2. What are the pros and cons of each option for me?
3. How do I get support to help me make a decision that is right for me?



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This leaflet is also available in audio, large print, Braille and other languages upon request. For more information please ask in the department/ward.

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