York Teaching Hospital
NHS Foundation Trust

Arteriogram and Endovascular Intervention

Information for patients, relatives and carers

ⓘ For more information, please contact:
The Vascular Imaging Team Tel: 01904 726065
The York Hospital, Wigginton Road, York, YO31 8HE

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About this leaflet

Your doctor has requested an arteriogram test and this can sometimes lead to a treatment called endovascular intervention. This information leaflet is intended to answer some questions you may have and help you decide whether you wish to go ahead with this treatment. Please do not be put off by the amount of information provided. If you would prefer not to read all the information, please just look at pages 3 - 5 and then turn to page 12 “The essentials”.

What is an arteriogram?

An arteriogram (or angiogram) is a special x-ray, which looks at the arteries (blood vessels) in the body. A fine plastic tube (catheter) is placed into the arteries, usually via the groin. The radiologist (x-ray doctor) can direct the tube wherever necessary by following it on a television screen. When the catheter is in the correct position a contrast agent (a dye which shows up on X-rays) is injected through it and pictures are taken which show the blood vessels and any blockages or narrowings that they contain. The whole procedure usually takes less than one hour.

Are there any alternatives to an arteriogram?

Several types of body scan can give information about the condition of the blood vessels. These techniques are used where possible, but all scanning methods have limitations. An arteriogram will usually give the most comprehensive and accurate picture of the inside of the arteries.

Do I continue to take my usual medication?

If you are on any medication, you may continue to take all your usual tablets, unless you are taking anticoagulants.

If you are taking **warfarin, apixaban, rivaroxaban, dabigatran or edoxaban**, please contact your consultant's secretary, who will advise if you need to stop taking these for three days before the procedure and if you will need another medication in place of these if it is stopped.

If you are taking aspirin or clopidogrel, please continue to take it.

If you are taking Metformin (for diabetes) continue to take your tablets up until the day of your procedure, but omit taking after the angiogram for two days.

What happens before an arteriogram?

If you are coming into hospital for this procedure, you may be admitted on to a ward or to the Vascular Imaging Unit if your circumstances permit. If attending as a day case you must be able to arrange your own transport to and from the Unit and you must have someone who can remain with you for 24 hours after your discharge.

Once on the ward or Vascular Imaging Unit, your details will be checked by a nurse. It is important that you say if you have any major illnesses or allergies, especially if you have any allergic reactions to drugs or to any medical investigations in the past.

You will be asked to change into an examination gown and to shave both groin areas before going into the examination room. You may wish to shave your groins before coming into hospital.

Giving your consent to the procedure

A member of the Vascular Imaging Team will see you and answer any questions you may have about the procedure. You will then be asked to sign a consent form (reference FYCON102-3 Femoral Arteriogram) giving your permission to go ahead.
Please remember that you can change your mind or ask for further information at any time before or during the procedure.

What happens during the arteriogram?

You will be awake during the test and be able to talk to the radiologist. He or she will inject local anaesthetic to numb the skin. The catheter will then be inserted and several sets of x-rays will be taken as the contrast enters the blood stream. At this stage you may feel hot or feel that you wish to pass water. These feelings are normal and last only a few seconds. The catheter will be removed afterwards and a member of the team will press where the catheter was inserted, usually your groin, for several minutes to minimise any bruising.

Remember an arteriogram is a diagnostic test that gives information about any narrowings or blockages in your arteries but does not treat them. No improvement in your condition is to be expected afterwards.

What is endovascular intervention?

Endovascular means within the blood vessel. Some types of narrowings and blockages can be treated from inside the artery. It may be possible to do this at the same time as your arteriogram. The doctor will always discuss these options with you at the time. Sometimes you will need to return to the Vascular Imaging Unit on another occasion.

The main techniques of endovascular intervention are angioplasty and stent insertion.

In angioplasty, a small balloon on the end of a catheter is put into the artery and fed around to the narrowing or blockage. It is then inflated briefly to stretch the artery, deflated and removed. You may not even feel this.

Some narrowings and blockages do not respond to angioplasty. After stretching, the walls of the artery may narrow back down straight away. In these cases it may be possible to insert a stent. A stent is a hollow metal mesh cylinder, which is put inside the artery to help it stay open. This is positioned by means of a small catheter entering the artery in your groin. Afterwards, the stent stays inside the artery permanently though you are not aware of it being there. Some of these stents also deliver a drug to the artery to help them stay open.

Endovascular intervention is not always successful. Some patients (10-50%, depending on the type of disease) will find that their symptoms are not improved, usually because it was not possible either to get through a blockage or to keep it open afterwards.

Most patients do have some improvement in their symptoms. This may not last forever, but it is often possible to repeat the treatment if symptoms recur.

What are the alternatives to endovascular intervention?

One alternative is to wait and see as exercise, dietary changes, medication and most importantly not smoking can all help, particularly if the symptoms are mild. In suitable cases an operation can be done to clear the blockage or to bypass it. In some cases an operation may have a slightly greater chance of success, but an attempt at endovascular intervention may still be recommended because it is relatively quick and safe (some patients can go home on the same day). If it is unsuccessful an operation can still be done later.

Are there any risks with these procedures?

There is very little risk of damaging your artery with the catheters used for a diagnostic arteriogram. The risk is greater with endovascular intervention because diseased arteries are deliberately being stretched, but fewer than 3 in 100 patients will have a worsening of their condition as a result, and most can still be helped by an operation. Urgent further procedures or surgery for bleeding or arterial injury are very rarely necessary. If there are any risks related to your condition or to the particular type of procedure you are having, these will be fully discussed with you.

It is normal to have some bruising or bleeding in the groin after an arteriogram but it is rare for measures other then pressing on the groin by hand to be needed to control bleeding.

There is a slight risk of an allergic reaction to the contrast agent (dye), which may lead to a skin rash. On rare occasions, more serious complications can occur but the risk of a fatal allergic reaction is estimated to be less than one in 100,000.

The doctors in the Radiology Department are trained to deal with any complications. However**, if you have had an allergic reaction to an injection of x-ray contrast in the past you must tell a member of staff before you go in for the examination**.

The contrast agent can upset your kidney function. This is more likely to happen if your kidneys are already diseased. If this were the case then you would be admitted to hospital the day before the angiogram to receive either fluid given through an intravenous drip or some tablets taken by mouth, or both. This reduces the risk of worsening kidney function to fewer than 1 in 50 patients. If kidney function does worsen this is usually a temporary upset, which should improve over four to five days.

X-rays are used to take the pictures so the procedure also carries small risks associated with ionising radiation. If you are female and you might be pregnant, it is essential that you inform a member of staff beforehand.

The amount of radiation varies depending on the complexity of the procedure and can be quite low, similar to what you would receive naturally from the environment as something called background radiation, over the course of a year or so. For the more complex procedures the amount of radiation could be much more than this and may amount to the equivalent of 20 years of environmental background radiation.

All of the above risks have been considered by the radiologist and your doctors who feel that the risks are outweighed by the potential benefits to you of having the procedure. Please ask if you have concerns or would like to discuss further.

What happens after arteriogram, angioplasty or stent insertion?

Care is similar whether you have just had an arteriogram or you have had an angioplasty or stent insertion. You will be returned to the ward, or nursed within the Vascular Imaging Unit and asked to remain flat in bed. A nurse will come to see you at regular intervals. You will be allowed to sit up and then be mobilised. If your appointment is for an inpatient stay you will probably stay in hospital overnight.

Any bruising or swelling should subside over the next few days. You should not drive for at least two days afterwards or do strenuous exercise until any bruising has settled. If you notice increased swelling or bleeding in your groin, or if your leg becomes cold or painful you should go to a hospital Accident and Emergency department.

Further information

Please ask! Questions relating to the procedure can be asked at any time during your stay, or you can contact the Vascular Imaging Unit on (01904) 726065. Questions about your overall condition may be best answered by your consultant or by your own GP.

Arteriography and endovascular intervention, “the essentials.”

- Please read pages 3 - 5 at the start of this booklet.
- You will be awake during your procedure. Local anaesthetic is given to numb your groin.
- Depending upon what is found, it may be possible to treat the narrowings or blockages in your arteries by “keyhole” techniques known as endovascular intervention. Sometimes this can be done at the time of the arteriogram test.
- You will have to spend approximately three hours in bed following your arteriogram.
- If you are admitted to the Vascular Imaging Unit as a day case you will normally go home the same day. If you are admitted just for the test you will usually go home the next day.
- You should expect some bruising in the groin, and you should not drive for at least two days afterwards or do strenuous exercise until any bruising has settled. If you notice increased swelling or any bleeding in your groin, or if your leg becomes cold or painful you should go to a hospital Accident and Emergency department.
- There is no guarantee of successful treatment but complications are rare, and less likely than with alternative methods of treatment.

Data Protection Act

Data regarding your procedure is held on the Hospital computer system and may be used for local or national audit purposes. Please tell us if you are concerned about this.

Tell us what you think of this leaflet

We hope that you found this leaflet helpful. If you would like to tell us what you think, please contact the Vascular Imaging Unit, The York Hospital, Wigginton Road, York, YO31 8HE or telephone 01904 726065.

Teaching, training, and research

Our Trust is committed to teaching, training, and research to support the development of health and healthcare in our community. Healthcare students may observe consultations for this purpose. You can opt out if you do not want students to observe. We may also ask you if you would like to be involved in our research.

Patient Advice and Liaison Service (PALS)

PALS offers impartial advice and assistance to patients, their relatives, friends and carers. We can listen to feedback (positive or negative), answer questions and help resolve any concerns about Trust services.

PALS can be contacted on 01904 726262, or email pals@york.nhs.uk.

An answer phone is available out of hours.

Leaflets in alternative languages or formats

Please telephone or email if you require this information in a different language or format, for example Braille, large print or audio.

如果你要求本資 不同的 或 式提供，電
或發電

Jeżeli niniejsze informacje potrzebne są w innym języku lub formacie, należy zadzwonić lub wysłać wiadomość e-mail

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Telephone: 01904 725566
Email: access@york.nhs.uk

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