Angiogram / Venogram

Radiology

Introduction

The aim of this leaflet is to explain the procedure for patients undergoing an angiogram / venogram. This leaflet is not meant to replace informed discussion between you and your doctor, but can act as a starting point for outlining risks and benefits.

What is an angiogram / venogram?

An angiogram is a diagnostic X-ray examination designed to show the arteries and veins in your body relevant to your problems/symptoms. A dye (contrast agent), which usually contains iodine, is injected directly into the artery / vein through a fine tube (catheter). The contrast agent fills the arteries and veins making them more visible on an X-ray screen. This examination can highlight diseases such as peripheral vascular disease or atherosclerosis. These diseases mainly affects the arteries or veins in your limbs for example your legs.

Who has made the decision?

Your doctor needs detailed images of the arteries to determine the most appropriate treatment for you. Angiograms / Venograms are most commonly performed to investigate blockages, areas of bleeding and to depict the blood supply to abnormal areas. Other tests such as a doppler ultrasound scan, a computed tomography (CT) scan or a magnetic resonance imaging (MRI) scan may have been performed but your doctor has decided that more detailed information about your arteries is required.

The choice about which treatment is best for you will be made together with your doctor. This will be based on the risks and benefits of the treatment and your individual circumstances.

Who will do the procedure?

An Interventional radiologist will perform the angiogram / venogram. They have special expertise in interpreting the images and using imaging to guide catheters and wires to aid diagnosis and treatment.

The prevention of infection is a major priority in all healthcare and everyone has a part to play.

- **Please decontaminate your hands frequently for 20 seconds using soap and water or alcohol gel if available**
- **If you have symptoms of diarrhoea and/or vomiting, cough or other respiratory symptoms, a temperature or any loss of taste or smell please do not visit the hospital or any other care facility and seek advice from 111**
- **Keep the environment clean and tidy**
- **Let's work together to keep infections out of our hospitals and care homes.**

Consent

We must seek your consent for any procedure or treatment beforehand. Written consent will be obtained from yourself by a doctor to give permission to have the procedure done. The doctor will explain the risks, benefits and alternatives where relevant before you sign the consent. A referral will be made and your appointment will be arranged. If you are unsure about any aspect of the procedure or treatment proposed please do not hesitate to ask for more information.

What are the potential benefits of having an angiogram / venogram?

This test will help to identify any issues that could be causing your pain or symptoms.

What are the potential risks of having an angiogram / venogram?

- Bruising and tenderness around the puncture site
- If there is bleeding from the area where the catheter was placed, you may have an area where blood collects under the skin called a haematoma. This usually clears up on its own
- Occasionally a pulsating lump develops in the groin at the site of access. This is because bleeding occurred after the catheter was removed. The clot produced a small sac on the side of the artery / vein via the hole made in the artery / vein. If this occurs during an angiogram, the lump is connected to the artery and therefore has a pulse. The sac is called a false aneurysm. If the sac is above a certain size it is treated by a simple injection into the sac to block the small hole connecting it to the artery. This occurs in approximately 1 in 1000 people. If this occurs after you have left the department, contact the intervention department or your GP straight away
- There is a risk of the access site becoming infected. This can be treated with antibiotics
- Rarely a surgical operation will be required to restore blood flow if flow is limited or affected during the procedure
- Death as a result of the procedure is very rare
- **Radiation:** Ionising radiation may cause cancer many years or decades after the exposure. We are all at risk of developing cancer during our lifetime. 50% of the population is likely to develop one of the many forms of cancer at some stage during our lifetime. It has been estimated that undergoing this procedure may increase the chances of this happening to you to about 0.1 %. The requesting doctor and the doctor that will be performing your examination feel that the benefit of having the test or treatment outweighs the risk from the exposure to radiation. If you have further questions about the risk of exposure to radiation, please talk to your doctor during consent.

Please contact the X-ray Department as soon as you receive this appointment if you think you may be pregnant!

- Contrast agent: The “dye” that is used to show up the vessels can have side effects for a minority of patients:
  - 3 in 100 patients experience nausea and hot flushes
  - 4 in 10,000 may have more serious effects including breathing difficulties.

If a risk / side effect does occur the doctors, nurses and radiographers are trained to deal with it.

Are there any alternative treatments and what if I decide not to have it done?

The consultant in charge of your care will discuss the alternatives with you which may include other examinations such as an MRI scan or ultrasound. They will also discuss the consequences of no treatment.

Are you required to make any special preparations?

Angiogram / Venograms are usually carried out as a day case procedure under local or no anaesthetic.

- You can eat and drink as normal unless a doctor or nurse has specifically said otherwise
- If you have any allergies or have previously had a reaction to the dye (contrast agent), you must tell the radiology staff before you have the procedure
- You may need someone to collect you and stay home with you overnight after your procedure. This is dependent on the type of angiogram / venogram you are having. Please contact the interventional department if you have not been given any advice regarding this.

If you are taking the following medication and the doctor has not discussed them during consent please contact the X-ray Department when you receive this information:

- Acenocoumarol, Apixaban, Asprin, Bivalirudin, Dabigatron, Dalteparin, Danaparoid, Dipyridamole, Edoxaban, Enoxoparin (clexane) Fondaparinux, Heparin, Phenindione, Tinzaparin, Warfarin.

Where will the procedure take place?

The procedure will take place in the angiography suite; this is located within the Radiology department. This is similar to an operating theatre in which specialised X-ray equipment has been installed.

What actually happens during an angiogram / venogram?

You may be asked to change into a hospital gown. Observations of your heart rate and blood pressure will be taken during and after the procedure. A team of nurses and radiographers will assist the radiologist during the procedure. A cannula or a sheath will be inserted into the affected vein or artery. Depending on where in the body your symptoms are will depend on whether a sheath (a short hollow tube which is used to aid safe movement of wires, catheters or contrast up or down an artery or vein) is inserted or a cannula. The radiologist will inject contrast into the artery / vein to highlight the blood vessels. Once all imaging is complete, the cannula / sheath will be removed.

Will it hurt?

The procedure is not usually painful. As the dye passes around your body you may get a warm feeling which some people can find a little unpleasant. This should not last long.

How long will it take?

The procedure time will depend on the size of the artery / vein and where it is in the body. On average the procedure will take about up to 30 minutes.

What happens afterwards?

- You will return to the radiology day case unit
- The nurse on the unit will look at the skin entry point to make sure there is no bleeding from it
- You will stay on the day case unit for a short while to make sure you have no reaction to the contrast
- You will need to rest in bed for two to four hours if the doctor has gained access through the groin. You will then be able to sit up and walk around if there are no complications.

Going home advice

- Any concerns should be reported to your GP or the interventional radiology department
- The dressing can be removed 48 hours after the procedure for angiograms and the next day for venograms
- **Angiograms from the groin:**
  - Do not undertake strenuous activities for the next 48 hours
  - You will need to regularly check the procedure site for oozing or swelling
  - Special care must be taken when driving especially if your access site is in the groin. Staff will give you further information on the day unit but, we advise you do not drive for the first 48 hours after the procedure. If bruising over the groin is preventing you from braking quickly and effectively, it is advised you do not drive until the bruise has resolved. Further information can be found on the DVLA website: https://www.gov.uk/guidance/general-information-assessing-fitness-to-drive
  - You may need somebody to stay with you at home and access to a telephone for 24 hours following the procedure. This should be discussed with the radiologist during consent clinic or with the referring consultant before the procedure as this is not relevant for all angiograms This should be discussed with the radiologist before the procedure as this is not relevant for all angiograms
- It is unlikely that the access site will bleed, but if this happens after an **Angiogram**, you should follow the following instructions.
  - Stop what you are doing and lie down
  - Press firmly on the site with your fingers
  - Call NHS helpline on **111** or **999**, say you have had an angiogram and the site is bleeding.

Trainees

A Radiology trainee (qualified experienced doctors training in Radiology) or occasionally a student may be present during the examination. If you would prefer them not to attend, please let a member of Radiology staff know.

How to contact us

If you have any personal access needs, require wheelchair access or wish to speak to a member of staff for further information please contact the Interventional Radiology department on (01902) 307999 Ext 6344 between 9.00am and 5.00pm

Angiography Suite / Interventional Radiology
Second floor Radiology A2
New Cross Hospital
Wolverhampton
West Midlands
WV10 0QP

Patient Advice and Liaison Service
New Cross Hospital
01902 307999 ext: 5362
Email: rwh-tr.pals@nhs.net

Further information

Further information about your examination is available from The British Society of Interventional Radiologists at:

http://www.bsir.org/static/uploads/resources/BSIR_Patient_Leaflet_-_Angiography.pdf

English

If you need information in another way like easy read or a different language please let us know.

If you need an interpreter or assistance please let us know.

Lithuanian

Jeigu norėtumėte, kad informacija jums būtų pateikta kitu būdu, pavyzdžiui, supaprastinta forma ar kita kalba, prašome mums apie tai pranešti.

Jeigu jums reikia vertėjo ar kitos pagalbos, prašome mums apie tai pranešti.

Polish

Jeżeli chcieliby Państwo otrzymać te informacje w innej postaci, na przykład w wersji łatwej do czytania lub w innym języku, prosimy powiedzieć nam o tym.

Prosimy poinformować nas również, jeżeli potrzebowaliby Państwo usługi tłumaczenia ustnego lub innej pomocy.

Punjabi

ਜੇ ਤੁਹਾਨੂੰ ਇਹ ਜਾਣਕਾਰੀ ਕਿਸੇ ਹੋਰ ਰੂਪ ਵਿਚ, ਜਿਵੇਂ ਪੜ੍ਹਨ ਵਿਚ ਆਸਾਨ ਰੂਪ ਜਾਂ ਕਿਸੇ ਦੂਜੀ ਭਾਸ਼ਾ ਵਿਚ, ਚਾਹੀਦੀ ਹੈ ਤਾਂ ਕਿਰਪਾ ਕਰਕੇ ਸਾਨੂੰ ਦੱਸੋ।

ਜੇ ਤੁਹਾਨੂੰ ਦੁਭਾਸ਼ੀਏ ਦੀ ਜਾਂ ਸਹਾਇਤਾ ਦੀ ਲੋੜ ਹੈ ਤਾਂ ਕਿਰਪਾ ਕਰਕੇ ਸਾਨੂੰ ਦੱਸੋ।

Romanian

Dacă aveți nevoie de informații în alt format, ca de exemplu caractere ușor de citit sau altă limbă, vă rugăm să ne informați.

Dacă aveți nevoie de un interpret sau de asistență, vă rugăm să ne informați.

Traditional Chinese

如果您需要以其他方式了解信息，如易读或其他语种，请告诉我们。

如果您需要口译人员或帮助，请告诉我们。

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