

# Interventional Neuro-Radiology Service

# Cerebral Angiogram

Information for patients



Your doctor has recommended for you to have a Cerebral Angiogram. This leaflet will explain what the procedure involves, the outcomes and the possible risks.

## **What is a cerebral angiogram?**

Your doctor has asked you to have a cerebral angiogram which is a special test used to look closely at the blood vessels in your brain. This test has been requested because your doctor thinks you may have an abnormality in the blood vessels in your brain this may include an aneurysm (bulge in the blood vessel wall) or an arteriovenous malformation (AVM) which is an abnormal tangle of blood vessels. Or you have been previously treated for an aneurysm and require a follow up procedure to check the aneurysm is still blocked off.

## **How do I prepare?**

When you arrive in radiology theatres on the day of your procedure, you will be seen by a nurse who will check information such as what medications you are taking, if you have any allergies and any relevant past medical history. They will also check your blood pressure and insert a cannula into the vein in your hand or arm. You will then be seen by the radiologist responsible for doing your procedure who will explain step by step what will happen including any risks involved, you will then be given the opportunity to ask any questions. If you are happy to proceed you will be asked to sign a consent form. You will be asked to change into a gown and remove all underwear prior to going into the procedure room.

## How is it performed?

### Consent

Before the procedure, the Neuro-radiologist will meet you in our recovery area to discuss the procedure in more detail, the risks and answer any of your questions to your satisfaction before you provide your permission and sign your consent form.

### Anaesthetic

The majority of cerebral angiograms are done under local anaesthetic however a general anaesthetic may be indicated for a small number of patients. If you require a general anaesthetic your doctor will advise you of this and separate instructions will be provided.

### Operation

You will be asked to lie flat on the table with your head in a special support. The nurse will attach some monitoring to you to check your blood pressure, oxygen levels and heart rate. There will be a nurse to monitor you throughout and provide any support you require while the second nurse assists the radiologist with the procedure.

The radiographer will be there to control the x-ray machine ensuring your safety throughout. The radiologist will then gain access to your blood vessels through either the artery in your groin (femoral) or the artery in your wrist (radial). The nurse will prep your groin/wrist with an antiseptic solution.

A sterile drape will then be placed over you in order to keep everything as clean as possible throughout the procedure. Local anaesthetic will be injected into the skin surrounding your groin/wrist area to numb it. This may feel similar to a bee sting initially but after a couple of minutes the area should be numb and all you should feel is pressure; it shouldn't be painful. Please let the doctor know if it hurts. An ultrasound machine may be used to

help the radiologist find and access the blood vessel. A small incision in the skin will be made and a needle inserted into the artery through which a wire will be introduced to guide the sheath into the place (small thin tube similar to a cannula).

Through this the radiologist will pass a thin catheter and wire into your blood vessels and navigate through your body and into the blood vessels in your brain. X-rays will be used to help the radiologist guide the catheter and wire through the blood vessels. A special x-ray dye (contrast) will be used to make the blood vessels visible on x-ray.

When the x-ray dye is injected, you may feel a strange warm sensation in your head, some patients experience temporary visual disturbances, this depends on which blood vessels in the brain are being looked at.

## Staff Involved

Interventional Radiology (IR) procedures are performed by a multidisciplinary team. The team includes the following key Staff:

- **Interventional Radiologist (Consultant/Fellow):** A doctor specially trained in minimally invasive, image-guided techniques who performs the procedure.
- **Radiology Nurses:** Highly trained nurses who care for the patient before, during, and after the procedure. They assist with sedation, monitor vital signs (heart rate, breathing, oxygen levels), and may “scrub in” to assist the radiologist directly.
- **Radiographers:** Experts in imaging equipment who operate the machines to provide real-time guidance for the doctor.
- **Senior Clinical Support Workers (SCSWs):** Assist with the setup of the room, patient positioning, and maintenance of sterile conditions

## What are the risks?

This is overall a safe procedure, although with any procedures, this carries the following risks:

- Severe groin haematoma (that requires operation or blood transfusion or delays discharge)
- Stroke (0.5%)
- Migraine
- Temporary memory loss
- Confusion (0.5%)
- Allergic reaction to contrast dye (mild symptoms like nausea, itchiness and rashes occur in 3%; moderate to severe symptoms such as severe vomiting, bronchospasm occur in less than 1%; risk of death is rare, estimated at 1:170,000)
- X-rays will be used to make images of your body and guide your doctor during the procedure. X-rays are a type of radiation. We are all exposed to low levels of natural radiation as part of our everyday lives and medical x-rays 5 give an extra dose of radiation. Radiation can increase your chances of developing cancer many years or decades after the exposure. The chances of this happening to you as a result of this procedure are considered to be very low.
- In some very rare situations, you might experience some hair loss or some reddening of the skin in the area that was imaged. If this happens, you should contact your clinical team who will be able to give some advice on the simple steps you can take to look after your skin.
- It is important to remember that your doctor thinks that the benefits of this procedure outweigh any risks from the radiation. We will make sure that the amount of radiation used in your procedure is as low as possible.

## What else to expect from this operation?

### Admission

Most cerebral angiograms can be done as a day case procedure however an overnight admission to the hospital may be required if you don't have a responsible adult to remain with you for 24 hours following your procedure. You will be asked to attend Radiology Theatres at 8am in the morning of your procedure. If you require an overnight admission, you may be asked to attend ward L26 which is the admissions ward. You will be informed of where to go by the bookings team when your appointment is made.

### Recovery

Your recovery may vary depending on the size and location of the sheath used for the procedure. If you have a sheath in your groin the hole in the artery will either, be closed with a small plug or using firm pressure for around 10 minutes. If a plug is used you will be able to sit up immediately and mobilise after two hours of bed rest. If manual pressure is applied you will be asked to lie flat for at least an hour before sitting up for a further hour minimum. Once your period of bed rest is complete you will be advised to mobilise gently. If there are any complications for example bleeding from the site/development of a lump under the skin (haematoma) you may be asked to extend your period of bed rest. If you have a sheath in the artery in your wrist a band will be placed tightly around your wrist. This is a special band which has a small balloon inflated with air. The band will be deflated slowly over a period of time. During which, you will be able to mobilise gently, you will not be required to have a period of bed rest. Once the band is fully deflated it will be removed and a small dressing will be applied.

## Aftercare

Before you are discharged home you will be given a letter with instructions on what to do when you get home this will be explained by the Nurse looking after you in the recovery area. You must have someone with you for the first 24 hours.

## Care at home

All being well, you will normally be discharged on the same day.

- **Exercise:** It is advisable that you rest for the first 24 – 48 hours after your procedure and avoid going up and down stairs too frequently and do not carry put any heavy lifting, you should not do any strenuous exercise during this time.
- **Work:** You will usually be able to get back to your normal activities the day after the procedure. However, you should avoid doing anything strenuous for at least 48 hours after you have been discharged.
- **Driving/travel:** It is recommended that you do not drive for 2 days post cerebral angiogram.
- **Medicines:** The radiologist will advise you when to restart any medication that was stopped for the procedure, as well as the specialist nurse on the day case ward before going home.
- **Results:** The radiologist will discuss the result of the angiogram after the procedure. The management plan may need to be discussed at MDT with the surgeons, and the radiologist or the neurosurgeon will write to you with the results.
- **Follow-up:** Your doctor will schedule follow-up appointments to check your progress and plan any further treatments based on the results of the angiogram.

## Contact information

We hope some of your questions have been answered by this leaflet. If there are any questions you would like to ask before you come for your operation, please get in touch.

### Via telephone:

Interventional Radiology LGI: **0113 392 3311**

(Monday - Friday from 9am until 5pm, except Bank Holidays)

Ward 24 LGI: **0113 392 7424** (Out-of-hours)

Ward 25 LGI: **0113 392 7425** (Out-of-hours)

Neuro Nurse Specialists: **0113 392 3148** or **0113 392 566**

Your GP or NHS direct on **111** (routine) | **999** (emergency)

### Or via email:

**leedsth-tr.radiologytheatresenquiries@nhs.net**

## How to get to our department

We are Radiology Theatres and we're located in LGI Jubilee Wing, B Floor.

## Follow this link to see how to get to us:



[www.accessable.co.uk/leeds-teaching-hospitals-nhs-trust/leeds-general-infirmary/access-guides/jubilee-wing](http://www.accessable.co.uk/leeds-teaching-hospitals-nhs-trust/leeds-general-infirmary/access-guides/jubilee-wing)



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