

Information for patients and carers

Endovascular Treatment of a Cerebral Aneurysm



What is a cerebral aneurysm?

A cerebral aneurysm is a bulging, weakened area in the wall of an artery in the brain. The constant flow of blood into the brain can cause this weakness to enlarge and balloon outwards.

There is a risk that this aneurysm can burst and cause a bleed in the brain known as subarachnoid haemorrhage, which is why treatment is offered.

What does endovascular treatment involve?

An endovascular procedure is one which is carried out through the blood vessels by a consultant neuro interventional radiologist. A needle is inserted into the artery in the groin. Using X-rays, a catheter is then navigated to the aneurysm, where it is then filled with coils to stop blood entering it.

Occasionally a stent (an artificial tube) is required, as well as coils, to help seal the aneurysm; this will be placed inside the artery at the base of the aneurysm.

If you have been informed that a stent is required you should have had clear instructions about the blood thinning tablets you should be taking before and after the procedure. If not, please contact the neurovascular specialist nurse (details at the end of the leaflet).

How do I prepare for the procedure?

On the day of your procedure, you will be asked to arrive at the admissions lounge located on the neurosurgery ward.

You are requested not to eat from 12 midnight prior to your procedure. However, you may drink water until 6am.

You will be asked to change into a hospital gown and remove your underwear. Please leave any jewellery at home if you can.

You will be staying in the hospital for up to 2 to 3 days, or until you have fully recovered, so please pack a bag with overnight clothes, toiletries and any medications you will require.

There may be emergency cases that take clinical priority on the day that you are admitted. Should this occur, we will keep you informed and perform your procedure as early in the day as possible. In cases where we are unable to proceed, we may ask you to stay overnight, and we will perform the procedure the following day.

It is important to let the medical team know if you think you may be pregnant, or if you have any medical conditions such as; asthma, diabetes, clotting problems, kidney problems or if you have ever had an allergic reaction to iodine.

Where will the procedure take place and who will perform it?

The procedure will take place in the Neuro X-ray Suite at Royal Preston Hospital. The procedure will be performed by a specialist doctor called a neuro interventional radiologist. The other staff involved in your care who will be in the room during the procedure are; an anaesthetist, radiographers and nurses.

Consent for the procedure will be taken by the neuro interventional radiologist, at which point you will have an opportunity to ask any questions about the procedure.

What will happen during the procedure?

The procedure will take 2 to 3 hours to perform under general anaesthesia.

You will be taken into the Neuro X-ray Suite which contains two specialist X-ray machines (see image below). You will be asked to lie on your back on the X-ray table. Monitoring equipment will be attached to your chest, arm and finger to check your heart rate, blood pressure and oxygen levels. The anaesthetist will insert a needle in one of the veins on the back of your hand and put you to sleep using a general anaesthetic.

This is a minimally invasive procedure in which a small plastic tube called a catheter is inserted through the artery in the groin. A dye containing iodine will be injected throughout the procedure whilst X-rays are taken to aid the radiologist to navigate the catheter to the position of the aneurysm.



Once in position, the coils will be placed into the aneurysm through the catheter. Several coils may be used depending on the size and shape of the aneurysm. If a stent is required, this will have been specifically explained prior to the procedure.

Once the procedure is completed a closure device will be inserted to close the artery.

Are there any risks or potential complications?

All aneurysm treatments carry some risk and will be discussed with you prior to the procedure.

The most common complication is that you may have bruising in the groin where the catheter was inserted. This is usually a small bruise which can vary with each individual.

Occasionally people develop an allergic reaction to the dye which is used during the procedure, but this is rare.

As we are using X-rays during the procedure for a prolonged period of time, there may be some hair loss. Modern equipment and techniques are designed to keep the radiation dose to a minimum. Procedures involving the blood vessels of the brain carry a small risk of stroke. This can range from a minor problem, which gets better over time, to a severe disability involving movement, balance, speech, vision or even a threat to life.

Headaches are quite common after aneurysm treatments. Routine pain killers, rest and drinking plenty of water will help.

You may have been asked to take blood thinning medication prior to the procedure and for months afterwards. These tablets can increase the risk of bleeding in other areas of the body and can irritate the stomach.

All general anaesthetics carry a degree of risk; this will be explained to you prior to the procedure by the anaesthetic team.

What happens afterwards?

Following the procedure, you will be nursed on the ward where you will be closely monitored. You can expect to stay in hospital for between 2 to 3 days or until you are fully recovered.

You should avoid heavy physical activity for at least 2 weeks following the procedure.

The nurses on the ward will carry out regular observations and ask questions to assess that you are aware of your surroundings. Your blood pressure and pulse will also be monitored as well as your groin for signs of bleeding, excessive bruising or swelling. It is normal to have some bruising at the skin around the groin.

What follow up will I receive?

You will be seen at the routine Neuro Vascular clinic following discharge to discuss the outcome of the procedure and any further imaging that is required.

Contact details

Appointments: **01772 523459**
Specialist Nurse: **01772 528422**



Sources of further information

www.lancsteachinghospitals.nhs.uk

www.nhs.uk

www.patient.co.uk

www.accessable.co.uk

www.nhs.uk/conditions/brain-aneurysm/treatment/

www.brainandspine.org.uk/our-publications/our-fact-sheets/coiling-of-brain-aneurysms/

All our patient information leaflets are available on our website for patients to access and download:

www.lancsteachinghospitals.nhs.uk/patient-information-leaflets

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If you want to stop smoking, you can also contact Smokefree Lancashire on Freephone **08081962638**

Please ask a member of staff if you would like help in understanding this information.

This information can be made available in large print, audio, Braille and in other languages.

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