NHS
Lancashire Teaching Hospitals
NHS Foundation Trust

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.

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 or wrist, X-rays are then used to aid navigation of a catheter into the aneurysm, where it is then filled with coils or an intrasaccular device, 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).

Please inform us before you attend

- If you are or think you may be pregnant
- If you are breastfeeding/chest feeding
- If you have any medical conditions such as asthma, diabetes, clotting problems, kidney problems
- If you have ever had an allergic reaction to iodine

If you require an interpreter, please inform us as soon as you receive your appointment letter and we will arrange an official interpreter for you

Are there any special preparations required before the procedure?

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

Can I bring a relative or friend with me?

Anyone can accompany you to the hospital, but they will usually not be allowed into the room when you have your procedure. Please note that we do not have childcare facilities; if you need to bring your children with you, please bring along an adult who can supervise them while your procedure is being performed.

What happens when I arrive at the department?

On the day of the procedure, you will be asked to arrive, as instructed by your letter, to the Lancashire Elective Surgical Unit (LESU), this is located on the ground floor close to the Rosemere Unit and adjacent to the MRI department.

You will be asked to change into a hospital gown and may be asked to remove your underwear. This will depend on whether the procedure is to be carried out through the artery in your groin or wrist. 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 perform the procedure the following day.

What happens during the procedure?

The procedure will take place in the Neuro Intervention 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, operating department practitioner, radiographers and nurses.

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

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



You will be taken into the Neuro Intervention Suite which contains two specialist X-ray machines (see photo).

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 or wrist. 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. The number used depends on the size and shape of the aneurysm. In some cases, a single intrasaccular device may be used instead, delivered in the same way. If a stent is required, this will have been discussed with you beforehand.

Once the procedure is complete, the artery will be sealed either with a closure device in the groin or a compression band applied to the wrist.

What happens after the procedure?

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/wrist for signs of bleeding and excessive bruising or swelling.

Are there any risks?

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 to the groin or wrist 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 this 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 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.

When will I receive my results?

Following your discharge from hospital, you will be seen at the routine Neuro Vascular clinic to discuss the outcome of the procedure and any further imaging that is required.

Contact details

Should you require any further advice or information please contact us on the following telephone numbers:

Appointments: **01772 523459**
Specialist nurse: **01772 528422**
LESU: **01772 532518**
Ward 2A: **01772 522217**
Ward 2B: **01772 522713**
Ward 2C: **01772 528162**

Sources of further information

www.lancsteachinghospitals.nhs.uk
www.nhs.uk
www.patient.co.uk
www.accessable.co.uk
https://www.gov.uk/government/publications/ionising-radiation-from-medical-imaging-examinations-safety-advice/exposure-to-ionising-radiation-from-medical-imaging-safety-advice
https://www.nhs.uk/conditions/brain-aneurysm/treatment/
https://www.brainandspine.org.uk/our-publications/our-fact-sheets/coiling-of-brain-aneurysms/

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

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

Lancashire Teaching Hospitals is a smoke-free site. Smoking is not permitted anywhere on any of our premises, either inside or outside the buildings. Our staff will ask you about your smoking status when you come to hospital and will offer you support and advice about stopping smoking this will include Nicotine Replacement Therapy to help manage your symptoms of withdrawal and the opportunity to speak to a nurse or advisor from the specialist Tobacco and Alcohol Care Team.

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.

Our patient information group review our leaflets regularly, if you feel you would like to feedback on this information or to join our reading group please contact us on email address: patientexperienceandinvolvem@LTHTR.nhs.uk

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