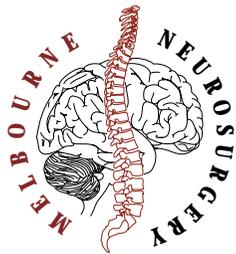


## PROCEDURE INFORMATION

# ANGIOGRAPHIC COILING OF CEREBRAL ANEURYSM



### WHAT IS A CEREBRAL ANEURYSM ?

A Cerebral Aneurysm is an abnormality in the wall of one of the blood vessels in the brain. The blood pushes on the wall of the blood vessel and produces a swelling that looks like a small balloon. These mostly occur around the base of the brain and occur where the vessels branch.



### WHAT IS A CEREBRAL ANGIOGRAM?

A Cerebral angiogram is where contrast (dye) is injected into the blood vessels (arteries and veins) of the brain. This outlines them for the x-ray machine to take pictures. This same route is used to place coils into the aneurysm

### WHO PERFORMS THE ANGIOGRAM ?

A **Radiologist**

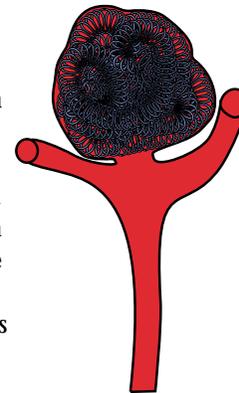
-specialist doctor trained in xray techniques. The person who does the coiling will be a specialist in Neuro-interventional radiology

### WHY IS THE ANEURYSM BEING COILED ?

This is to prevent it bleeding. Some aneurysms can be repaired surgically if they have bled or we are worried that they may bleed. The decision to coil or to operate will have been discussed with you.

### Coiling

This involves the insertion of multiple coils into the aneurysm via an angiogram type approach to effectively pack the aneurysm and cause the blood in it to clot. It has a lower complication rate (3.7%) than clipping but the chance of complete obliteration is only 54%. It is likely that as this technique gets better this will improve. The rebleeding rate is not yet fully known.



### WHAT YOU NEED TO TELL THE DOCTOR

If you have had a reaction to Contrast (dye)

If you have kidney disease

If you are pregnant

If you have clotting problems

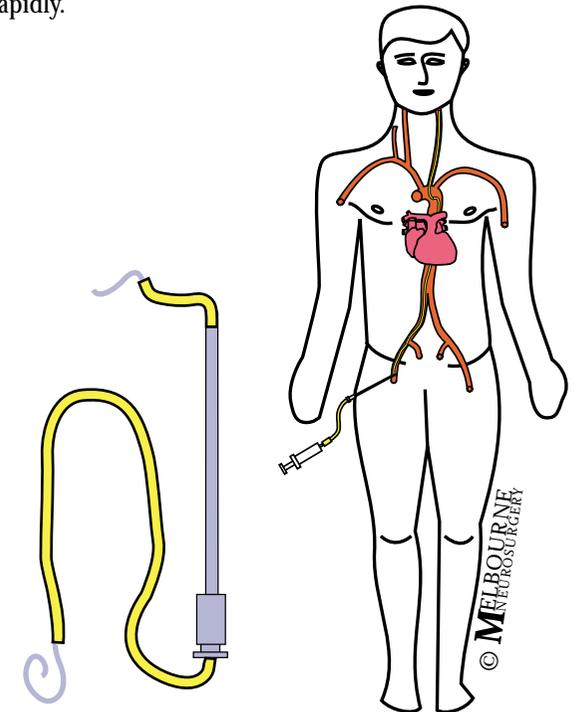
If you are taking blood thinning agents

e.g. Warfarin/ aspirin/ anti-inflammatory

### HOW IS IT PERFORMED ?

The test is performed in an angiography suite with an x-ray machine. You will have fasted for 4 hours before this. A doctor, nurse and a radiographer are usually present. You will have usually already had an angiogram to find the aneurysm and to determine if it is able to be coiled prior to this procedure. It is usual to have the coiling done under **General Anaesthetic**. You lie down on the x-ray table. Access to the brain blood vessels is obtained by feeding a fine catheter up from an artery in the groin, behind the heart to the main vessels feeding the brain.

The groin is anaesthetised with local anaesthetic by injection. Then a needle is pushed into the artery to gain access. A long fine catheter is then fed up the artery with the aid of a stiff wire in its middle. Using x-rays and contrast to show the path the catheter is fed up to the main artery to the brain. The contrast is either injected by hand or by a machine. It awake the injection may cause the side effects of nausea, warmth, dizziness or burning. Rarely it will cause irregular heartbeat. All of these things usually pass rapidly.





Multiple views of the aneurysm are needed so there are multiple injections of contrast with differing positions of the catheter and xray machine. If awake you will hear the xray machine taking lots of pictures quickly and this is because of the rapid flow of blood (and contrast) into the brain. While the pictures are being taken it is very important to keep still if awake.

Once enough information is gained a special catheter is inserted to allow the placing of the coils. The catheter is fed in through the neck of the aneurysm and the coil is then fed into it. Initially a large coil is fed in and then lots of small coils are fed inside this one. The large coil is to hold the small ones in. The process of feeding in the small coils is called packing. Once the aneurysm is obliterated then the catheters are withdrawn. The needle in artery in the groin is removed. Because this is a large artery, pressure is applied for some time to stop any bleeding

### **WHAT SHOULD YOU DO AFTER ?**

You will be kept in bed for at least four hours after the procedure with your leg straight, this is to prevent bleeding at the catheter site. Your vital signs and catheter site will be regularly checked. It is common to have some bruising around the site but if a lump develops then tell the nurse. If itching or a rash develops this may indicate an allergy to the dye.

Oral pain medication will be prescribed.

The blood is thinned for the procedure and this may remain for about 24 hours depending on the procedure.

Avoid activities in the next few days that involve stressing the injection site such as heavy lifting or repetitive bending of the hip joint.

You will be able to go home in couple of days depending on whether the aneurysm has bled or not. If it has bled then the stay may be prolonged

### **WHAT ARE THE RISKS?**

THERE ARE RISKS AT EACH STEP OF THE PROCEDURE

These will all be discussed with you by the radiologist who does the procedure.

THE COMMON RISKS ARE

Infection as the bloodstream is being entered.

Internal bleeding.

Bleeding from the aneurysm because the catheter or coils puncture it. (this is treated by continuing to pack the aneurysm to stop it bleeding)

Death

Haematoma or damage to the artery at the site of the puncture.

Irritation to the heart may cause an abnormal heartbeat.

Allergy to the contrast media may cause a rash /swelling/ difficulty breathing or heart problems.

Because the procedure may be prolonged there is the possibility of a large dose of X rays and this may cause some hair loss.

Sometimes the aneurysm cannot be coiled and the procedure will be aborted.

In elderly patients or those with atheroma (plaque) in their arteries if a small piece is dislodged by the catheter then a stroke may occur (this is usually transient). Sometimes a piece of the coil can prolapse into the vessel and this may block it and cause a stroke.

If the catheter needs to be fed up into the brain for a test then there is a risk of the catheter causing the artery to go into spasm or to block off. This may cause a stroke.

YOU WILL BE ASKED TO SIGN A CONSENT FORM TO SAY THAT YOU UNDERSTAND THE RISKS . IF YOU ARE NOT SURE ASK BEFORE YOU SIGN.

### **WHAT SHOULD YOU NOTIFY YOUR DOCTOR OF AFTER ?**

- 1. INCREASING LUMP IN GROIN**
- 2. SUDDEN DIZZINESS OR CHEST PAINS**
- 3. FEVER**
- 4. SEIZURES**
- 5. WEAKNESS**
- 6. HEADACHE**

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