

Embolisation of Head, Neck and Spinal Tumours

Consumer Information

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What is Embolisation of Head, Neck and Spinal Tumours?

Head, neck and spinal tumours (or growths) can occur on the coverings of the brain called meninges as well as anywhere in the head or neck region. These tumours can also occur in the back bone (spinal column). Structures inside the spinal column such as nerves can also give rise to tumours.

Often these tumours contain many blood vessels and could result in severe blood loss during an open surgical operation to remove them. The aim of embolisation is to block as many of the blood vessels as possible so that there is reduced blood loss during surgery making it safer, technically easier for the surgery to be performed, and sometimes quicker.

Embolisation is a "key hole" surgical technique (surgery through a small cut or incision) which enables the injection of medical grade "glue", special tiny coils or sand like particles directly into the blood vessels of the tumours.

The whole procedure is performed through a tiny plastic tube (catheter) placed into the blood vessels of the tumour, using X-ray to guide insertion of the catheter to make sure the tube is in the right position before the glue, particles or coils are injected via the catheter into the blood vessels.

How do I prepare for Embolisation of Head, Neck and Spinal Tumours?

PRIOR TO YOUR APPOINTMENT DAY:

Prior to the procedure, a nurse or doctor will contact you and advise you on what preparation is necessary.

The procedure may be performed under general anaesthetic (putting you to sleep) or local anaesthetic that will numb the skin where a small incision will be made to insert the catheter. You will need to fast overnight or for at least 4 to 6 hours.

If you are on medication, your doctor or nurse will discuss with you whether to continue with your medication and give you full instructions. In particular, if you have diabetes, kidney or thyroid diseases or if you are on blood thinning (anticoagulant) medication, special instructions will be provided to you. You will also be advised whether you need to attend a pre-admission clinic.

If you need to attend a pre-admission clinic, this will be a few days or weeks before the procedure. You will have a medical check up to ensure that you are fit for the operation and for the anaesthetic, to have any necessary blood tests performed, and to give you any information or any special medication that you may need to take before the embolisation procedure. You will also need to sign a consent form to give us permission to treat you.

The doctor performing the procedure will have received your medical history from your referring doctor and will decide whether you need to go to the pre-admission clinic and/or whether a pre assessment from an anaesthetist is also required.

If, apart from the tumour, you are otherwise healthy, your referring doctor may have already arranged for blood tests and assessed that you are suitable to have the procedure. If so, you may not need to attend a pre-admission clinic.

ON THE DAY OF YOUR APPOINTMENT:

If general anaesthetic is required, on the day of the embolisation procedure the anaesthetist will check you to ensure that you are fit for the anaesthetic. You can also be assessed as fit for the procedure by your referring doctor and may also have seen an anaesthetist if you attended the pre-admission clinic.

A small cannula (thin plastic tube) will be inserted into a vein in your arm so that we can put you to sleep and give you any necessary medication. The nurse will shave your groin so that there will be clear access to the artery in your groin which is part of the embolisation procedure. After you have gone to sleep, you may have a catheter inserted into your bladder to drain away urine and prevent the bladder from getting too full.

What happens during Embolisation of Head, Neck and Spinal Tumours?

As the procedure aims to block the blood vessels (arteries and veins) supplying blood to the tumour, we can get to the tumour through the blood vessels. After local anaesthetic has been injected in the groin to numb the area, a small cut (less than 1 centimetre) is made in the skin in your groin. Through this tiny cut, the artery in the groin is punctured with a small needle and a catheter (long narrow hollow tube) is inserted into the artery in the groin. This catheter is then inserted into the abnormal artery supplying the tumour.

Through this catheter, a preliminary angiogram is performed. This is where contrast medium (a fluid which contains iodine and which makes the blood vessels visible on angiogram images or pictures) is injected to outline the blood vessel. This helps to determine the best and safest way to embolise (block) the blood vessels of the tumour.

Through this catheter, several “embolic” (blocking) agents are injected into the blood vessels of the tumour.

These may be special medical grade “glue”, tiny coils, or sand like particles that will cause blood flow in the vessels supplying the tumour to decrease or stop completely.

At the end of the procedure, an internal stitch or suture may be used to close off the puncture hole of the artery in the groin.

The procedure aims to embolise as many blood vessels as possible in order to reduce or stop the blood supply to the tumour.

The treatment may be performed under general anaesthetic (putting you to sleep) so you will not feel anything.

Are there any after effects of Embolisation of Head, Neck and Spinal Tumours?

If the procedure goes well, the immediate after effects are minor. They are generally related to the general anaesthetic where you may have temporary nausea or vomiting but this can be controlled with medication.

You may also have a minor or uncommonly a moderate bruise in the groin but this will usually heal within days to several weeks.

Very rarely, there may be internal blood loss and you may need open surgery to stitch up the puncture hole. However, the rate of puncture site haematoma (a semi-solid mass of blood in the tissue) requiring transfusion, surgery or delayed discharge should be less than 3%: <http://www.ranzcr.edu.au/qualityprograms/accreditation/credentialling.cfm?>

How long does Embolisation of Head, Neck and Spinal Tumours take?

The time taken to perform the embolisation depends on the tumour and therefore is very variable and unpredictable. Typically it takes 2 to 6 hours. Usually you will be told that it will take either a whole morning or afternoon.

The length of stay in hospital varies from 1 to 2 days.

What are the risks of Embolisation of Head, Neck and Spinal Tumours?

There is an extremely small risk of serious allergic reaction, death, or brain damage from the general anaesthesia. The anaesthetist will discuss this with you.

Very rarely, there may be internal blood loss and you may need open surgery to stitch up the puncture hole in the groin. However, puncture site haematoma (a semi-solid mass of blood in the tissue) requiring transfusion, surgery or delayed discharge is less than 3%.

The risk directly related to the embolisation procedure itself depends on where the tumour is. The risk ranges from minimal to serious and can include stroke or paralysis (lack of movement) of a limb or limbs. However, the overall risk is very small, usually less than 1% to 2% chance of serious conditions such as stroke.

The effects of a stroke can vary. If it is mild, you could completely recover. If it is moderate or severe, you may be left with ongoing or permanent disability. These can include problems with speech, walking, loss of power in your arms or legs, loss of feeling in the limbs or body, and abnormal sensation from the limbs, such as tingling or “pins and needles”. In addition there may be loss of urinary bladder or bowel control (incontinence).

If very severe, an embolisation procedure can result in death, but this is very rare.

The radiologist will discuss with you in detail which of the above risks apply to your particular procedure as this can depend on the location and nature of your tumour.

What are the benefits of Embolisation of Head, Neck and Spinal Tumours?

The risk and benefits of the procedure directly related to you will be discussed fully by your treating doctor.

However, the main benefit is that there will be reduced blood loss during open surgery and the surgery will be safer.

Who does the Embolisation of Head, Neck and Spinal Tumours?

The embolisation procedure is performed by an interventional neuroradiologist, a specialist doctor trained to perform this type of procedure. The specialist doctor will also provide a written report to your referring doctor or specialist.

Where is an Embolisation of Head, Neck and Spinal Tumours done?

It will be performed in the angiographic or interventional suite in a radiology or imaging department of a hospital.

When can I expect the results of my Embolisation of Head, Neck and Spinal Tumours?

The treating doctor will explain to you the results of the procedure once you have properly woken up. The treating doctor will also provide a written report to the referring doctor or specialist.

Please note:

This information is of a general nature only and is not intended as a substitute for medical advice. It is designed to support, not replace, the relationship that exists between a patient and his/her doctor. It is recommended that any specific questions regarding your procedure be discussed with your family doctor or medical specialist

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