

## Having a Trans-Arterial Embolisation

You are due to have trans-arterial hepatic embolisation as treatment for the cancer in your liver.

This booklet provides information about the procedure. We hope it will answer most of your questions, but please feel free to ask staff any other questions you may have.

### What does embolisation involve?

Embolisation means blocking the blood vessels that go to the cancer in the liver. This starves the cancer of the oxygen and nutrients that it needs to survive and grow. Trans-arterial embolisation is a well-established treatment worldwide for the treatment of neuroendocrine tumours in the liver. It is usually successful in controlling the symptoms of the disease, such as facial flushing, diarrhoea, abdominal pain etc.

You will likely need to stay in hospital for approximately a week. This is to ensure that you are safely recovered before going home.

If you are taking blood-thinning medication such as apixaban, warfarin, clopidogrel or aspirin, you may be asked to pause this for about one week before the planned embolisation.

Generally you will see an interventional radiology consultant in the Interventional Radiology clinic a few weeks before the procedure for consultation and consent. This is to explain the procedure, its benefits and risks. You will likely need to attend such a consultation before your first embolisation procedure, but not necessarily for any subsequent embolisation procedures.

You will be admitted the afternoon before your procedure.

The nurses on the ward will make sure that you understand fully what will happen. You will be seen by one of the doctors. They will examine you and take blood samples for tests. If it is safe to proceed with the embolisation, based on the blood test results, you will have an intravenous drip containing Octreotide. It will be started up to 12 hours prior to the procedure and usually continue for approximately 48 hours after the procedure.

### On the day of your procedure

You will be asked not to eat anything for four hours before the embolisation, but you may drink clear fluids before the procedure. This is because you are given some painkillers and we need to ensure that you are not sick. You will be asked to put on a hospital gown. You will have a cannula (a small tube used for injections) put into a vein in your arm. This is used to give the pain relief. You may be given an antibiotic before the procedure either through the cannula in your arm or as a tablet. A porter and ward nurse will take you on your bed to the angiography suite.

There, the doctor carrying out the procedure will ask you to sign a consent form (unless you have already done so in intervention radiology clinic). By doing this you are confirming that you understand what will happen to you and accept any potential complications that are associated with an embolisation. You can raise any questions or concerns that you have with your doctor or nurses.

## Information for Patients

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Once you have signed the consent form, you will be transferred to the room where the procedure takes place. The nurses will get everything ready for the embolisation. Everyone will be wearing theatre gowns and you will be covered in sterile paper sheets. Please don't be concerned about this – it simply means that the procedure is carried out in a sterile manner to minimise infection risk. It may seem like a lot of people are busying themselves around you but there is normally a nurse near you to speak to if you need to ask something. The preferred routes for gaining access to the liver are either the left wrist blood vessel or groin blood vessels. One of these routes will be chosen on the day depending on the size of the blood vessel, as checked by ultrasound immediately before the procedure.

Once everything is ready the doctor will put local anaesthetic in the skin in your groin or wrist, depending on which route was chosen. This will sting a little when it goes in but will make the area numb.

A catheter (a longer version of the cannula in your arm) will then be inserted, into either the vessel in your left wrist or in your groin (depending on the suitability of the vessels). This will be fed up into your liver. A dye that shows up on X-rays will be injected. X-rays will be taken of the dye so as to locate the appropriate vessels that supply blood to the cancer. It sometimes takes a while to get the catheter to the right place and it will normally take a few X-rays to get a full picture.

Once the catheter is in place the embolisation particles will be injected. This is the part that cuts the blood supply to the cancer.

Pain relief will be given through the needle in your arm just before the particles are injected. If you feel pain or are very uncomfortable, tell one of the nurses and they will give you some extra medication.

Depending on the route of access (wrist or groin) bleeding may be stopped at the end of the procedure by using a pressure wrist band or by pressing on the groin. You will be monitored in the angiography suite until you are ready to return to the ward.

Once back on the ward, you may need to lie flat for four hours and will remain on bed rest for a total of six hours, if access was gained by groin route. Your blood pressure and pulse will be checked regularly and the nurses will check your groin/wrist for bleeding. You will be given pain medication if required.

Once recovered and safe, you will be allowed home. Please ensure that you contact us if you are worried about anything. Most people recover within six weeks after an embolisation.

### Side effects

Embolisation has some potential complications and side effects:

#### Pain

This is normally around the liver (the upper right side of your abdomen) but can also radiate to the back or shoulders. The pain normally lasts for 24–48 hours after the procedure but can continue a bit longer in some patients. This pain is normally easily controlled but may require strong pain medication. Make sure that you tell your nurse if you are in pain as they can give you the appropriate pain treatment.

## Information for Patients

Some of the pain relief medications we give have side effects of their own. Some of the stronger treatments cause constipation and if you are on these for an extended length of time, you will likely need to take a laxative.

Please ensure that a nurse has explained your medication before you leave the hospital.

## Bleeding

Because a blood vessel in the groin or wrist is used to access the liver there is a risk of bleeding. The nurses will check access site regularly after the procedure. You will need to lie flat for four hours and stay in your bed for a further two hours, if the groin is used. This is extremely important and reduces the risk of bleeding.

## Liver infection/abscess

A small number of patients develop liver infection/abscesses after an embolisation. We observe patients for at least two days in hospital to check for signs of infection. If a temperature develops then we start antibiotic treatment and continue monitoring until we are certain any infection is adequately treated. Patients are then able to go home. The signs of an abscess or infection include having a temperature and feeling generally unwell.

It is vital that you contact the hospital if you experience these symptoms after going home as we may need to give you further treatment. Do not ignore these symptoms, but contact somebody straight away.

## Liver failure

This is a rare but serious complication of embolisation. It is impossible to cut the blood supply to the cancer without affecting some of the healthy liver. We attempt to minimise the risk of this by checking the liver function blood tests before we embolise to see if there is adequate liver reserve. The doctors who will be treating you are specialist interventional radiologists and their priority is to affect as little healthy liver as possible.

## Carcinoid Crisis

In order to prevent/minimise a worsening of your carcinoid symptoms, we usually start an infusion (drip) of Octreotide. Nevertheless the procedure can still precipitate a carcinoid crisis that could become serious, in spite of the Octreotide infusion. Thankfully a severe carcinoid crisis is uncommon and can usually be managed with medications and fluids.

Please use the space below to write down any questions you may have and bring this with you to your next appointment.

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