

Venous Stent Insertion

Introduction

This leaflet tells you about the procedure known as venous stent. It explains what is involved and what the possible risks are. It is not meant to replace informed discussion between you and your doctor, but can act as a starting point for such a discussion.

Whether you are having the venous stent as a planned or emergency procedure, you should have sufficient explanation before you sign the consent form.

The Medical Imaging Department may also be called the x-ray or radiology department. It is the facility in the hospital where radiological examinations of patients are carried out, using a range of x-ray equipment, such as a CT (computed tomography) scanner, ultrasound machine and a MRI (magnetic resonance imaging) scanner.

What is a venous stent?

A venous stent is a permanent metal spring/tube which can be inserted into a blocked or narrowed blood vessel (vein). This is usually because the vein is narrowed or blocked by tumour or thrombus (blood clot). Insertion of a venous stent is a way of relieving a blockage in a vein, without having an operation. A fine plastic tube, called a catheter, is inserted through the blockage in the vein. A stent is then inserted to open up the blockage and allow more blood to flow through it. This is a permanent device and once placed cannot be removed except by an open operation.

Why do I need a venous stent?

There are number of reasons why you may require a venous stent. Usually the flow of blood back to the heart from the lower limbs or head and neck is reduced giving symptoms of a swollen arm, leg, head or neck with arm venous congestion and engorgement (enlargement of the veins and swelling). This can lead to head and neck swelling, shortness of breath and headaches.

What are the options or alternatives?

Thrombus (clotted blood) can be relieved by thinning the blood, but this can take time and may not be appropriate. Tumour blocking a vein could be treated by chemotherapy, radiotherapy or surgery. Again these options can take time to be effective or might not be appropriate in your circumstance. You should have had the opportunity to discuss this with your specialist.

Who has made the decision?

The consultant in charge of your case, and the radiologist performing the procedure, will have discussed the situation, and feel that this is the best treatment option. However, you will also have the opportunity for your opinion to be taken into account, and if, after discussion with your doctors, you do not want the procedure carried out, you can decide against it.

Who will be performing the venous stent insertion?

A specially trained doctor called a radiologist. Radiologists have special expertise in using x-ray and scanning equipment, and also in interpreting the images produced. They will look at these images while carrying out the procedure.

Radiographers and radiology nurses will be present in the room to assist during the procedure, they will introduce themselves at the start of the procedure.

Occasionally student radiographers or medical students will be present to observe the procedure.

Where will the procedure take place?

Generally in the Medical Imaging Department.

How do I prepare for a venous stent?

- You will have had some blood tests performed before the procedure to check that you do not have an increased risk of bleeding.
- You are asked not to eat for 4 hours prior to the procedure. You may drink a little water.
- You will need someone to drive you home and to look after you for 24 hours.
- You should be prepared to stay overnight if necessary.
- If you have any allergies or you have previously reacted to intravenous contrast medium, you must let the doctor know. Intravenous contrast medium is the injection we give you during some scans.
- If you are diabetic, please contact the Medical Imaging Department on **01392 402336 selecting option 2, in-patient enquiries, option 6** X-ray Special Procedures.
- If you normally take any medication to thin your blood (anticoagulation or antiplatelet drugs) such as: **warfarin / clopidogrel / aspirin / non-steroidal anti-inflammatory**

drugs (NSAIDS / brufen / ibrufen / nurofen) / dabigatran (Pradaxa) / rivaroxiban (Xarelto) / Apixaban (Eliquis) / phendione / acenocoumarol – then these may need to be stopped or altered. Please contact the Medical Imaging Department on 01392 402336 selecting option 2, in-patient enquiries and then option 6 for X-ray Special Procedures.

- Other medication should be taken as normal.
- A pregnancy test may be performed on arrival.

What actually happens during a venous stent insertion?

You will lie on the x-ray table, generally flat on your back. You may have a needle put into a vein in your arm, so that the radiologist can give you a sedative or painkillers. You may have a monitoring device attached to your chest and finger, and may be given oxygen through small tubes in your nose.

The radiologist will keep everything as sterile as possible, and may wear a theatre gown and operating gloves. The skin near the point of insertion, probably the groin, will be cleaned with antiseptic, and then the rest of your body will be covered with a theatre towel.

The skin and deeper tissues over the vein will be anaesthetised with local anaesthetic, and then a needle will be inserted into the vein. Once the radiologist is satisfied that this is correctly positioned, a guide wire is placed through the needle, and into the vein. The needle is then withdrawn, allowing the fine, plastic tube called a catheter to be placed over the wire and into the vein.

The radiologist uses the x-ray equipment to make sure that the catheter and the wire are moved into the right position, so that they pass into the narrowed area, and a balloon can be inflated (venoplasty). This may need to be done several times in order for the narrowed area to open up sufficiently to improve the blood flow. If the result from the venoplasty is suboptimal it may be necessary to insert a small metal tube (stent) to hold the vein open. Once the stent is in position this is permanent and cannot be removed.

The radiologist will check progress by injecting contrast medium down the catheter to show how much the narrowed vein has opened up. When he or she is satisfied that a good result has been obtained, and the stent fully expanded with the aid of a balloon this is deflated and the catheter is removed. The radiologist will then press firmly on the skin entry point for several minutes, to prevent any bleeding.

Will it hurt?

Some discomfort may be felt in the skin and deeper tissues during injection of the local anaesthetic. After this, the procedure should not be painful. There will be a nurse, or another member of clinical staff, standing next to you and looking after you. If the procedure does become uncomfortable for you, then they will be able to arrange for you to have some painkillers through the needle in your arm.

As the dye, or contrast medium, passes around your body, you may get a warm feeling, which some people can find a little unpleasant, however, this soon passes.

How long will it take?

Every patient's situation is different, and it is not always easy to predict how complex or how straightforward the procedure will be. Generally, the procedure will last approximately 1 hour. As a guide, expect to be in the Medical Imaging Department for about 2 hours altogether.

What happens afterwards?

You will be taken back to your ward on a trolley. Nurses on the ward will carry out routine observations, such as taking your pulse and blood pressure, to make sure that there are no problems. They will also look at the skin entry point to make sure there is no bleeding from it. You will generally stay in bed for a few hours, until you have recovered. You may be allowed home on the same day, or kept in hospital overnight, please be prepared for this.

What will happen to the results?

A report of the procedure will be recorded in your notes immediately and also sent to your specialist within 48 hours.

Are there any risks or complications?

Venoplasty and venous stent insertion is a very safe procedure, but there are some risks and complications that can arise. There may be a small bruise around the site where the needle has been inserted and this is quite normal. If this becomes a large bruise, then there may be a risk of it getting infected and this would require treatment with antibiotics. Very rarely, damage can be caused to a vein by the catheter, balloon or stent and this may need to be treated by surgery or another radiological procedure. This can result in vessel rupture, dissection (tearing of the lining of the vein), thrombosis (clot within the vein) or embolus of material into the pulmonary circulation (passage of clot into the lung). This may require further procedures to be performed radiologically (aspiration or thrombolysis) or surgically (pulmonary embolectomy or bypass). It is important to understand that once a stent has been inserted it can only be removed by open surgery.

As with any mechanical device there is also the possibility the stent may malfunction or migrate into a different position.

Despite these possible complications, the procedure is normally very safe, and is carried out with no significant side-effects at all.

Finally...

Some of your questions should have been answered by this leaflet, but remember that this is only a starting point for discussion about your treatment with the doctors looking after you. Make sure you are satisfied that you have received enough information about the procedure, before you sign the consent form.

Contact us

If you found reading your leaflet difficult, you do not understand what it means for you, if you have any queries or concerns you can contact us on: 01392 402336 and we can talk it through.

How to get to the Royal Devon & Exeter Hospital at Wonford

Please refer to the enclosed "Welcome to the Medical Imaging Department" leaflet or use the Trusts website for the latest information:

www.rdehospital.nhs.uk/our-sites

For more information on the Medical Imaging Department, please visit our website:

www.rdehospital.nhs.uk/services/medical-imaging-radiology-x-ray

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