Superior vena cava stent insertion

Your doctors have recommended that you have a procedure known as superior vena cava stent. This factsheet explains what the procedure involves and the possible risks and complications you may experience -your doctor will have discussed these with you. If you are still unsure about the benefits of having the procedure, please ask.

What is a superior vena cava stent?
The superior vena cava (SVC) is the large vein that carries blood from the head, neck and arms back to the heart. If this vein becomes obstructed (narrowed) or blocked it can result in swelling of the face and arms as well as headaches and breathlessness. An SVC stent is a metal mesh tube that is placed inside the vein to hold it open and improve blood flow. The stent insertion should result in a rapid improvement in your symptoms.

Who has made the decision?
The consultant in charge of your case and the doctor carrying out the procedure will have discussed your situation and feel that this is the best treatment option for you. However, your opinion will also 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 doing the procedure?
A doctor called an interventional radiologist will carry out the procedure. They are able to see what they are doing by using x-rays and other scanning equipment. They will be assisted by radiology nurses and radiographers who will look after you throughout the procedure.

Where will the procedure take place?
This procedure is carried out in a room in the x-ray (radiology) department.

Are there any risks or complications?
The insertion of an SVC stent is considered a safe procedure designed to provide relief from unpleasant symptoms related to narrowing of the SVC. However, as with any surgical procedure some complications can occur.

- You may develop a small bruise where the needle was inserted. This is quite normal. If this develops into a larger bruise there is a risk that this could become infected. This would need treating with antibiotics.
- There is a chance that the stent could move or become blocked which may result in a return of your symptoms.
- Occasionally it may not be possible to place the stent at all, and the procedure may have to be abandoned.

- We will expose you to ionising radiation when we carry out this examination. We are all exposed to ionising radiation from naturally occurring sources such as cosmic rays, certain types of soil and rocks and even food we eat. Ionising radiation can cause cell damage that in turn, after many years, may turn cancerous. The radiation associated with your exam will therefore carry a very moderate risk which is less than 1%. This risk will be far outweighed by the benefits of having this exposure. We will also tailor the amount of radiation we use to you.

How do I prepare for the procedure?

- You will need to have had some blood tests beforehand (2-7 days before your procedure) to check that you do not have an increased risk of bleeding
- If not already an inpatient, you will need to be admitted to the hospital as an inpatient, either on the day of the procedure or the day before
- You **must not** eat anything for **six hours** before the procedure although you will be allowed to drink clear fluids until **two hours** before the procedure
- You should not bring any valuables with you in case of loss or theft
- If you are taking any medication that thins your blood such as aspirin, tinizeparin, clopidogrel or warfarin you **must** contact the radiology department
- If you have any allergies, you **must** let your doctor know. If you have previously reacted to intravenous contrast medium (the dye used for kidney x-rays and CT scans), then you must also let your doctor know.

Can I bring a relative or friend?

You may bring someone with you but for safety reasons they cannot accompany you into the x-ray room.

When you arrive at the hospital

- Please report to the day care area, which is written on your appointment letter
- You will have a fine plastic tube (cannula) put into a vein in your arm, so that you can be given fluids and receive medication while in the x-ray department. Once in place, this tube does not cause any pain.
- You will be allocated a bed, although you may not go there until after the procedure
- Before you go to the x-ray department, you will be asked to change into a hospital gown
- You can either walk to the x-ray department or be taken there on a trolley
- When you arrive in the x-ray department, a nurse will greet you and the radiologist will explain the procedure and discuss it with you before you sign the consent form. If you have any questions, this is a good time to ask the radiologist.

What happens during the procedure?

- You will lie on the x-ray table, generally flat on your back
- You will have a monitoring device attached to your chest, arm and finger, and be given oxygen through small tubes in your nose

- The radiologist will keep everything sterile, and will wear a sterile gown and gloves
- Your skin near the point of insertion, probably your groin, will be cleaned with cold antiseptic. The rest of your body will be covered with a sterile sheet.
- The radiologist will numb the skin and deeper tissues over the vein with local anaesthetic and then a needle will be inserted into a vein
- Once the radiologist is satisfied that this is correctly positioned, a guide wire is threaded through the needle, and into the vein. The needle is then withdrawn and a fine plastic tube, called a catheter, is placed over the wire and into the vein. A guide wire will be passed up through the vein until it reaches the area of narrowing.
- The x-ray machine will guide the placement of this wire. A catheter (fine plastic tube) will be threaded over this wire, and the stent will be placed through this across the narrowed area of vein.
- Once in place, the stent can be opened further by inflating a small 'balloon' inside it. This may cause some discomfort in your chest. The catheter will then be removed from your groin, but the radiologist will need to press this area firmly for a short time to prevent any bleeding.

Will it hurt?
You may feel some discomfort in your skin and deeper tissues during the injection of the local anaesthetic. After this, the procedure should not be painful. A nurse or another member of clinical staff will be close by throughout the procedure. You will be awake during the procedure and able to tell the radiologist if you feel any pain or discomfort.

How long will it take?
Every patient is different, and it is not always easy to predict; however, expect the procedure to take about one hour.

What happens afterwards?

- You will be taken back to the ward or day care area on a trolley or a bed
- Nurses on the ward will carry out routine observations, such as checking your pulse and blood pressure, to make sure that there are no problems
- They will also look at the entry point to make sure there is no bleeding
- You will stay in bed for a few hours, until you have recovered
- You will usually be allowed home on the same day, but occasionally you may need to stay in hospital overnight
- The decision to send you home will be taken by the medical team looking after you and will depend on what other treatment you are receiving
- Generally, you can eat and drink as normal after the procedure.

Contact details
If you have any questions or concerns about your procedure, or you are unable to attend for this appointment, please call:

The Radiology Department: 0207 808 2571

Further information
The Royal College of Radiologists
Website: www.rcr.ac.uk for general information about radiology departments.

Macmillan Cancer Support
Support line: 0808 808 00 00 8am – 8pm, 7 days a week
www.macmillan.org.uk for information and emotional and financial support on cancer.

National Institute for Health and Clinical Excellence
www.nice.org.uk/guidance for evidence-based recommendations by independent committees.