

# **Superior Vena Cava Stenting**

This information sheet explains about the procedure to insert a superior vena cava stent. It describes what the procedure involves, the risks, and what to expect when you come to the Interventional Radiology department for treatment.

Please note that this leaflet is not meant to replace discussion between you and your doctor. You should raise any questions you may have with the doctor who has referred you for, or is performing, the procedure.

# What is SVC stenting?

The superior vena cava (SVC) is a large vein which carries blood from the upper body back towards the heart. SVC stenting is a minimally-invasive procedure that is used to treat blockages or narrowing within the SVC. The stenting procedure involves placing an expandable metal mesh tube called a stent in the narrowed or blocked area to restore normal blood flow.

### Why do I need an SVC stent?

You may need a SVC stent if you have a condition called superior vena cava syndrome which is caused by an obstructed SVC. This could be due to a blockage or narrowing, most commonly as a result of a tumour or scarring, often in combination with blood clot. This condition can cause symptoms such as swelling of the face, neck, or arms, dilated veins, difficulty breathing, dizziness, or a feeling of heaviness in the chest. SVC stenting is performed to relieve these symptoms and restore proper blood flow to the heart.

### How do I prepare for SVC stenting?

Before the procedure, you will be provided with specific instructions to prepare. This may include fasting for a certain period before the procedure, discontinuing certain medications, and informing your doctor about any allergies or health conditions you may have. You may also have pre-treatment imaging to confirm the location and assess the severity of your SVC obstruction. It is essential to follow these instructions carefully to ensure a safe and successful procedure.

### How is SVC stenting performed?

During the SVC stenting procedure, you will be given a local anaesthetic to numb the area where a small incision will be made, usually in the groin area. Sometimes a small incision in the neck is also required. A thin tube called a sheath will be inserted through this incision into the vein. A thin plastic catheter and guidewire will be guided to the site of the blockage in the superior vena cava using X-ray imaging.

The radiologist will inject a contrast dye into the blood vessel through the catheter to enhance the visibility of the blood vessels and the area of blockage. The blockage is crossed with a guidewire and a stent will then be positioned and deployed to widen the narrowed or blocked area. More dye will be used to see if the narrowing or blockage has been successfully treated and further treatment with another stent or using a balloon to stretch the stent may be required.

When the narrowing is very tight, a balloon might be inflated in the narrow area before a stent is placed to allow the stent to be positioned more easily. The guidewire and tube in the groin will be removed and the radiologist or nurse may need to press on the incision site for about 10 minutes to reduce the risk of bleeding.

#### Who performs the procedure and where?

SVC stenting is typically performed by an Interventional Radiologist, a doctor trained in performing minimally invasive procedures under X-ray and other image guidance. The procedure is usually carried out in a specialised interventional radiology suit. This is an operating theatre with special X-ray imaging equipment and is usually within the radiology (X-ray) department.



# What are the potential risks/complications of SVC stenting?

While SVC stenting is generally considered safe, there are some potential risks and complications associated with the procedure. These may include bleeding or bruising at the incision site, infection, allergic reactions to contrast dye, or a temporary increase in symptoms. The stent could also become blocked after the procedure, and you may need another procedure to fix this.

Serious risks are rare. If there is a lot of blood clot, the procedure could dislodge some of this and cause pulmonary embolism (clot in the lungs). There is also a risk of damaging the blood vessel causing serious bleeding or a tear that extends to the heart. This can occur during the procedure or later if the stent moves positions. These complications can be life threatening. Your doctor will discuss these risks with you beforehand and take all necessary precautions to minimise them.

### What happens afterwards?

After the procedure, you will be taken to a recovery area where you will be monitored closely for a few hours. Nursing staff will take basic observations such as heart rate and blood pressure. You may experience some soreness or bruising at the incision site, which should gradually improve over time. Usually the symptoms of SVC syndrome you have been experiencing will improve within minutes of the stent being deployed. Your healthcare team will provide you with specific instructions on how to care for the incision, medications you may need to take, and any activity restrictions you should follow.

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