

# Stent placement for vena caval obstruction

Understanding NICE guidance –  
information for people considering the  
procedure, and for the public

July 2004



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### **Stent placement for vena caval obstruction**

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#### **To order copies**

Copies of this booklet can be ordered from the NHS Response Line; telephone 0870 1555 455 and quote reference number N0656. A version in Welsh and English is also available, reference number N0657. Mae fersiwn yn Gymraeg ac yn Saesneg ar gael hefyd, rhif cyfeirnod N0657. The NICE interventional procedures guidance on which this information is based is available from the NICE website ([www.nice.org.uk](http://www.nice.org.uk)). Copies can also be obtained from the NHS Response Line, reference number N0655.

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## About this information

This information describes the guidance that the National Institute for Clinical Excellence (NICE) has issued to the NHS on a procedure called stent placement for vena caval obstruction. It is not a complete description of what is involved in the procedure – the patient’s healthcare team should describe it in detail.

NICE has looked at whether stent placement is safe enough and works well enough for it to be used routinely for the treatment of vena caval obstruction.

To produce this guidance, NICE has:

- looked at the results of studies on the safety of stent placement for vena caval obstruction and how well it works
- asked experts for their opinions
- asked the views of the organisations that speak for the healthcare professionals and the patients and carers who will be affected by this guidance.

This guidance is part of NICE’s work on ‘interventional procedures’ (see ‘Further information’ on page 10).

## About stent placement for vena caval obstruction

After blood has been pumped around the body, it flows back to the heart through blood vessels called the inferior vena cava and the superior vena cava. Sometimes one of these blood vessels can become narrow or blocked, and so blood can't flow back to the heart easily. This is called vena caval obstruction. The most common cause of this is cancer, especially lung cancer.

Stent placement involves passing a narrow tube called a catheter up through a blood vessel, usually starting at the top of the leg, and guiding it into the narrow area in the vena cava that's blocked or narrow. The doctors use X-rays to help them get the catheter to the right position. When it's in place, another small piece of tubing called a stent, which is attached to the catheter, is gently pushed into the narrow section to widen it up. Sometimes the stent is designed to expand once it's in place, and sometimes a balloon is gently inflated to push the stent open.

The procedure is known as a minimally invasive procedure because it's carried out through small cuts rather than a large opening.

Other treatments for vena caval obstruction caused by cancer include radiotherapy (X-ray treatment) and chemotherapy (using anti-cancer medicines).

## How well it works

### What the studies said

The results of 23 studies involving patients who had stent placement were looked at. Overall, the procedure helped overcome the effects of the narrowing or blockage in 151 out of 159 patients (this is the same as 95%). During the months after the procedure (up to 8 months), the narrowing or blockage returned in 17 patients. But in 146 patients (92%), the vena cava was kept open for a relatively long period. In comparison, the effects of the narrowing or blockage were overcome using chemotherapy, radiotherapy or both in 377 out of 487 patients in the studies (this is the same as 77%).

There was also evidence that the stent procedure had a quicker effect than radiotherapy or chemotherapy. For example, one study showed that the narrowing or blockage was overcome either straight away or within 48 hours in patients who had the stent procedure. But no effect was seen in patients who had radiotherapy for at least 2 weeks.

### What the experts said

The experts thought that the stent procedure worked very well.

## Risks and possible problems

### What the studies said

Patients who had the stent procedure in the studies didn't have many problems.

In the biggest single study, the stent was put into the wrong position in 2 out of 76 patients (3%). One patient needed treatment to stop blood from clotting (1%). One patient had chest pain for a short period (1%). And one patient needed a blood transfusion (1%).

In another study, the stent became blocked in 6 out of 52 patients (12%), and the stent moved from the correct position in one patient (2%).

### What the experts said

The experts did not have any major concerns about the safety of the stent procedure. They thought that the main possible problems were damage to or bursting of the vena cava, movement of the stent, and clots.

## What has NICE decided?

NICE has considered the evidence on stent placement. It has recommended that when doctors use it for people with vena caval obstruction, they should be sure that:

- the patient understands what is involved and agrees (consents) to the treatment, and
- the results of the procedure are monitored.

## Other comments from NICE

Most of the results from the studies NICE looked at involved patients whose lung cancer was causing the narrowing or blockage in the superior vena cava. So less is known about how well the procedure works or how safe it is when it's used for other patients.

Also, NICE has said that there was not much evidence about the procedure when it was used in children. Normally, for children and babies, the procedure would be carried out in a specialist children's heart unit.



## What the decision means for you

Your doctor may have offered you stent placement for vena caval obstruction. NICE has considered this procedure because it is relatively new. NICE has decided that the procedure is safe enough and works well enough for use in the NHS. Nonetheless, you should understand the benefits and risks of stent placement before you agree to it. Your doctor should discuss the benefits and risks with you. Some of these benefits and risks may be described above.

## Further information

You have the right to be fully informed and to share in decision-making about the treatment you receive. You may want to discuss this guidance with the doctors and nurses looking after you.

You can visit the NICE website ([www.nice.org.uk](http://www.nice.org.uk)) for further information about the National Institute for Clinical Excellence and the Interventional Procedures Programme. A copy of the full guidance on stent placement for vena caval obstruction is on the NICE website ([www.nice.org.uk/IPG079guidance](http://www.nice.org.uk/IPG079guidance)), or you can order a copy from the website or by telephoning the NHS Response Line on 0870 1555 455 and quoting reference number N0655. The evidence that NICE considered in developing this guidance is also available from the NICE website.

If you want more information on cancer, a good starting point is NHS Direct (telephone 0845 4647) or NHS Direct Online ([www.nhsdirect.nhs.uk](http://www.nhsdirect.nhs.uk)).

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