Thrombolysis for vascular conditions

The aim of this information sheet is to help answer some of the questions you may have about having thrombolysis. It explains what is involved and the potential risks of the procedure.

If you have any questions or concerns, please do not hesitate to speak to a doctor or nurse caring for you.

What is thrombolysis?
Thrombolysis means breaking up blood clots. Once a clot starts to form in a blood vessel, it may carry on getting bigger until the whole vessel is blocked. While an operation may be necessary to remove the clot, it is sometimes possible to dissolve the clot by injecting a thrombolytic (‘clot busting’) drug into the artery, directly into the clot. This can lead to a great improvement in blood flow, and make an operation unnecessary.

Why do I need thrombolysis?
Your doctors know that there is a problem with part of your circulation. You are likely to have had an angiogram, a special x-ray examination of the blood vessels, which has shown a blockage in an artery. If nothing is done about the situation, then severe and permanent damage may result. While the blockage could need treatment with surgery, in your case it has been decided that thrombolysis is the best way of proceeding.

Giving my consent (permission)
We want to involve you in all decisions about your care and treatment. If you decide to go ahead, you will be asked to sign a consent form. This confirms that you agree to have the procedure and understand what it involves. You should receive the leaflet, Helping you decide: our consent policy, which gives you more information. If you do not, please ask us for one.

What actually happens during thrombolysis?
The procedure starts off in exactly the same way as an angiogram, and if you have already had this performed, you will know what to expect. The procedure is performed by the radiologist and is done under local anaesthetic, which is medication that ‘freezes’ a small specific area of your body so it is pain free but does not put you to sleep.

The radiologist will use x-ray equipment and small amounts of contrast medium (dye) to position a catheter close to the blockage in the artery. The thrombolytic drug is injected down the catheter and into the blood clot. The radiologist will check progress by injecting contrast to show how much the clot has dissolved.

In some cases all the clot is dissolved at the first attempt. More commonly however, the catheter will need to be left in the artery and attached to an infusion pump, so that an infusion of the thrombolytic drug can be continued over the next few hours, or overnight.
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. The radiologist and other staff looking after you can give you additional painkillers if necessary. You will be awake during the procedure, and able to tell the radiologist if you feel any pain, or become uncomfortable in any other way. As the contrast medium passes around your body, you may get a warm feeling, which some people can find a little unpleasant.

What happens afterwards?
You will be taken back to the ward where the nurses will carry out routine observations, such as taking your blood pressure and pulse, to make sure that there are no untoward effects. They will also look at the puncture site to make sure there is no bleeding. You need to stay in bed for as long as the catheter is in the artery. The radiologist needs to check on progress, and will arrange for you to go back to the x-ray department later in the day or the next day. By injecting a small amount of contrast dye down the catheter it is possible to tell how much of the clot has dissolved. The radiologist may also use a special balloon, on a different catheter, to try and open up a narrowed artery, and improve blood flow even more. Your radiologist will tell you how long you need to stay in hospital and it may be for a few days.

What happens next?
This all depends on where the blockage was, and how successful the thrombolysis has been. In many cases, no further procedure is necessary. In some cases the artery may be so narrowed that an operation is still required to permanently improve the blood supply.

Most patients will be started on aspirin or an anticoagulant (a medicine to thin the blood), to improve blood flow in the arteries, and to reduce the chance of a similar condition occurring again. When you go home you should continue with all your usual medications. If you are taking metformin, this should be withheld for 48 hours after the procedure and then continued as usual.

What are the risks?
There may occasionally 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 is a risk of it getting infected, and this may require treatment with antibiotics or surgery.

- The most common side-effect of thrombolytic drugs is bleeding (haemorrhage). This is most commonly seen at the site of injection but may also occur at other sites in the body. Generally the risk of a minor haemorrhage (a bleed that does not require any surgery or blood transfusion) is 15% (i.e. it will happen in around 15 out of every 100 people having the treatment). The risk of a major bleed requiring surgery or a blood transfusion is 5% (5 out of every 100 people). The risk of the treatment causing a stroke is around 1%. However, the risks associated with not treating your blocked artery are felt to be greater than the risks of bleeding elsewhere.

- Sometimes the blood clot may be so extensive that the thrombolytic drug simply cannot dissolve it all. In these cases, surgery will be required to relieve the blockage.

- Some patients have an allergic reaction to the thrombolytic drug. Please tell your nurse or doctor if you have had a previous allergic reaction.
• Some patients have an allergic reaction to the dye used to obtain the x-ray pictures. This reaction is usually minor, for example a skin rash, which will clear up on its own. On rare occasions, it can be a more serious allergy to the dye, which can be treated with steroids. Please tell your nurse or doctor if you have had a previous allergic reaction.

• The iodine in the x-ray dye can affect kidney function, particularly if there is already some kidney damage. Intravenous fluids and medication can be given before and after the procedure to try to reduce this risk. A routine pre-procedure blood test will always be done to assess your renal (kidney) function.

• Bleeding or bruising can occur under the skin (where the catheter is inserted in the groin). This is known as a haematoma and is very common, and can take one/two weeks to disappear.

• Occasionally the artery can be damaged during the procedure. This can sometimes be treated in the same department by putting a stent with a covering around it (stent-graft) into the artery to seal the tear. If this is not possible an operation may be required to repair the artery. The risk of needing this operation is less than 1%.

• The most common complications are groin wound infections which in most cases can be managed by a course of oral antibiotics.

• Around one in 10 patients will need to have a further smaller operation in the future if a leak is detected around the stent at your follow-up appointment.

• General complications of this type of surgery include a heart attack and chest infection, but these are very rare.

What can I do to help myself?

Smoking: If you are a smoker the single most important thing you can do to help yourself is to give up smoking. Stopping smoking will also help to protect all of your arteries making it less likely that you will suffer from heart attacks or strokes. Giving up is not easy but there is a smoking cessation service and support groups that can help. Your vascular specialist nurse or GP practice nurse can advise you about these. You can contact the free NHS smoking helpline on 0800 022 4 322 or the Knowledge & Information Centre (KIC) (details below) who will give you details of our support services.

Inactivity: Gentle exercise such as walking and cycling are recommended to help improve your overall level of fitness. Exercise helps your body to produce healthy cholesterol and this helps to protect your arteries against bad cholesterol.

High blood pressure: It is very important that you have your blood pressure checked regularly, at least every six months. If you have been prescribed medications for high blood pressure, you must make sure that you take it according to the instructions given.

Diabetes: If you have diabetes it is important that your blood sugar levels are well controlled.
High blood cholesterol levels (fatty substance in your blood): You should eat a healthy balanced diet and try to reduce any excess weight. It is important to reduce the level of cholesterol in your blood. Your vascular nurse can refer you to a dietician if needed. You may be prescribed medication to help lower your cholesterol level (e.g. a statin) and low-dose aspirin to help prevent blood clots from forming.

Contact us
If you have any questions or concerns before or after you have left hospital, please contact the vascular specialist nurses on 07825 503902 (Monday to Friday 8am – 4pm).

You can also contact Luke ward on 020 7188 3566 or Sarah Swift ward 020 7188 8842 (24 hours) and speak to the ward sister or nurse in charge.

The above contacts can put you in touch with the following vascular consultants should you wish to do so: Miss Rachel Bell, Mr Stephen Black, Mr Tom Carrell, Mr Michael Dialynas, Mr Tommaso Donati, Mr Bijan Modarai, Mr Morad Sallam, Mr Mark Tyrell, Mr Hany Zayed, Mr Said Abisi, Mr Andrew McIrvine.

For more information leaflets on conditions, procedures, treatments and services offered at our hospitals, please visit www.guysandstthomas.nhs.uk/leaflets

Pharmacy Medicines Helpline
If you have any questions or concerns about your medicines, please speak to the staff caring for you or call our helpline.

Patient Advice and Liaison Service (PALS)
To make comments or raise concerns about the Trust’s services, please contact PALS. Ask a member of staff to direct you to the PALS office or:

Knowledge & Information Centre (KIC)
For more information about health conditions, support groups and local services, or to search the internet and send emails, please visit the KIC on the Ground Floor, North Wing, St Thomas’ Hospital.

Language support services
If you need an interpreter or information about your care in a different language or format, please get in touch using the following contact details.

NHS Choices
Provides online information and guidance on all aspects of health and healthcare, to help you make choices about your health.