

Thrombolysis

Introduction

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

If you are having thrombolysis done as a pre-planned procedure, then you should have plenty of time to discuss the situation with your own GP, your consultant and the Radiologist who will be doing the thrombolysis. However, it is more likely that you need the thrombolysis as an emergency, in which case there may be less time for discussion, but none the less you should have had sufficient explanation, before you sign the consent form.

What is Thrombolysis?

Thrombolysis means breaking up the 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 also possible to dissolve the clot by injecting a special "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 will result and amputation may be necessary. While the blockage could need treatment with surgery, in your case it has been decided that thrombolysis is the best way of proceeding.

Who has made the decision?

The doctors in charge of your case, and the radiologist doing the thrombolysis, will have discussed the situation, and feel that this is the best treatment option. Frequently the decision to undertake thrombolysis arises at the time of angiography and this treatment option will have been discussed prior to the procedure. However, you will also have the opportunity for your opinion to be considered and if, after discussion with your doctors, you do not want the procedure carried out, then you can decide against it.

Who will be doing the thrombolysis?

A specially trained doctor called an Interventional Radiologist. Radiologists have special expertise in using x-ray equipment, and in interpreting the images produced. They need to look at these images while carrying out the procedure. Interventional radiologists have additional specialised expertise in handling and manipulating catheters inside the body.

What are the risks and complications?

Thrombolysis is a safe procedure, but there are some risks and complications that can arise. There may occasionally be a small bruise or haematoma around the site where the needle has been inserted and this is quite normal. If this becomes a large bruise, then there is the risk of it getting infected and this would then require treatment with antibiotics. Very rarely, some damage can be caused to the artery by the catheter and this may need to be treated by surgery or another radiological procedure.

Clot busting drugs have to be very powerful in order to work and, consequently, there is a risk that bleeding will occur elsewhere. For example, if you have a duodenal ulcer, it is possible that this might start bleeding. If this happened, it would be necessary to treat it in the usual way, perhaps with a blood transfusion. 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 clot-busting drug simply cannot dissolve it all away. In these cases, it may be that surgery will be required to relieve the blockage.

Where will the procedure take place?

Generally in the x-ray department, in a special “interventional radiology” room, this is adapted for specialised procedures.

How do I prepare for thrombolysis?

You will need to be admitted to the hospital either as a day case or for an overnight stay. You will be asked not to eat for four hours beforehand, though you may be allowed to drink some water. You may receive a sedative to relieve anxiety. You will be asked to put on a hospital gown. As the procedure is generally carried out using the big artery in the groin, you will be asked to shave this area. 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 scanning, then you must also tell your doctor about this.

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. You will lie on the x-ray table, generally flat on your back. You need to have a needle put into a vein in your arm, so that sedation or pain relief can be given. Once in place, this needle will not cause any pain. You will also have a monitoring device attached to your chest and finger, and may be given oxygen through a small tube in your nose. The radiologist needs to keep everything as sterile as possible and will wear a theatre gown and operating gloves. The skin near the puncture site, probably the groin, will be swabbed with antiseptic, and then most of the rest of your body covered with a theatre towel.

The skin and deeper tissues over the artery will be anaesthetised with local anaesthetic and then a needle will be inserted into the artery. Once the radiologist is satisfied that this is correctly positioned, a guide wire is placed through the needle, and into the artery.

Then the needle is withdrawn allowing the small plastic tube, or catheter, to be placed over the wire and into the artery.

The radiologist will use the x-ray equipment and a small amount of contrast medium to make sure that the catheter is moved into the right position, very close to the blockage in the artery.

Then the wire will be withdrawn and the clot busting, or thrombolytic, drug 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. Although sometimes all the clot is dissolved at the first attempt, generally the catheter has to be left in the artery and attached to an infusion pump, so that injection of the clot busting drug can be continued over the next few hours, or days.

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 pain relief through the needle in your arm, 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 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 off and should not concern you.

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. Sometimes thrombolysis does not take very long, perhaps half an hour. As a guide, expect to be in the x-ray department for about an hour and a half.

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 untoward effects. They will also look at the puncture site to make sure there is no bleeding from it. You need to stay in bed for as long as the catheter stays in the artery. The radiologist needs to check on progress and will arrange for you to come back to the x-ray department in the next few hours or following day. By injecting a small amount of contrast medium, or dye, down the catheter it is possible to tell how much of the clot has dissolved. The radiologist may also use a special balloon, or a different catheter, to try and open up a narrowed artery, and improve blood flow even more.

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 required to permanently improve the blood supply. Most patients will be started on aspirin, or blood thinning drugs (anticoagulants) to improve blood flow in their arteries and to try and limit the chance of a similar condition occurring again.

Finally

Some of your questions should have been answered by this leaflet, but remember this is only a starting point for discussion about your treatment with the doctors looking after you.

Consent

Although you consent for this treatment, you may at any time after that withdraw such consent. Please discuss this with your medical team.

Thrombolysis is considered a safe procedure, designed to improve your medical condition and save you having a larger operation. There are some risks and possible complications involved which will be discussed with you by your doctor prior to the procedure.

Sources of information

This leaflet is based on information from Clinical Radiology Patients Liaison Group (CRPLG) of The Royal College of Radiologists and the British Society of Interventional Radiology (BSIR) who have given their permission for it to be reproduced.

Important information

Please note that this leaflet is intended as general information only. It is not definitive. We aim to make the information as up-to-date and accurate, but please be warned that it is always subject to change. Please therefore always check specific advice on the procedure or any concerns you may have with your doctor.

Your comments

We are always interested to hear your views about our leaflets. If you have any comments, please contact the Patient Experience Team on 01323 417400 Ext: 5860 or by email at: esh-tr.patientexperience@nhs.net

Hand hygiene

The Trust is committed to maintaining a clean, safe environment. Hand hygiene is very important in controlling infection. Alcohol gel is widely available at the patient bedside for staff use and at the entrance of each clinical area for visitors to clean their hands before and after entering.

Other formats

If you require any of the Trust leaflets in alternative formats, such as large print or alternative languages, please contact the Equality and Human Rights Department.

Tel: 01424 755255 Ext: 2620

After reading this information are there any questions you would like to ask? Please list below and ask your nurse or doctor.

Reference

The following clinicians have been consulted and agreed this patient information:
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The directorate group that have agreed this patient information leaflet:
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