

Catheter directed thrombolysis and pelvic venous stenting for ilio-femoral DVT

Information for patients



Catheter directed thrombolysis and pelvic venous stenting are procedures to treat a blood clot in the veins of your pelvis, a Deep Vein Thrombosis (DVT). This leaflet will explain what the procedure involves, the outcomes and the possible risks.

Why do you need this treatment?

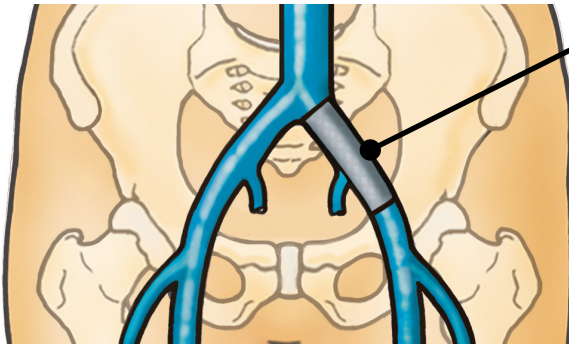
We have identified a blood clot in the veins in your pelvis (the iliac veins). These blood vessels carry blood from the legs back to the heart. The clot prevents blood draining efficiently from the leg which can cause pain, swelling and discolouration. About half of people who have had a blood clot in the veins of the pelvis can end up (over some years) with skin changes, discolouration, swelling, discomfort and in severe cases skin breakdown and leg ulcers. These changes are called Post-Thrombotic Syndrome (PTS).

What is thrombolysis?

Thrombolysis is a technique which dissolves the clot in the vein. A small tube (called a catheter) is inserted into the clotted vein via a skin puncture either in the thigh or behind the knee. Occasionally a puncture into the other groin or the neck is used. The tube is passed into the clot and a powerful 'clot busting' drug is slowly injected directly into the clot over 1-3 days. This usually results in the clot dissolving back into the bloodstream allowing blood flow through the vein to be restored.

What is pelvic venous stenting?

Frequently there is a narrowing in the vein which has contributed to the formation of the clot. If you have had a DVT, we know it is more likely to recur if we leave the narrowing untreated. For this reason, once we have dissolved the clot away, we insert a small balloon via the same skin puncture, pass it to the narrowing and inflate it to stretch the blood vessel open. We then insert a small metal scaffold (a stent) to hold the vessel open long term.



The picture shows a stent in a pelvic vein.

What are the results?

Thrombolysis results in complete or almost complete clearance of the clot from the vein in 80-90% of patients and in one study was associated with a reduction in symptoms of post-thrombotic syndrome from 55% to 40%. A more recent trial found no difference between patients treated with thrombolysis and those who were not. A proportion of the patients in this trial had DVT in the thigh only (with no clot in the pelvic veins) which we think explains the result. Because your clot is in the pelvis, we think the results with thrombolysis will be better than these trials suggest.

Stenting of the pelvic veins after thrombolysis improves the chances of the vein remaining open, improving your symptoms and reducing the risks of long term damage to the skin. We know that if the pelvic veins remain open long term the rates of post-thrombotic syndrome fall further (from 55% to about 30%). The long-term results of stenting are not currently known which is of importance in younger patients.

Guidance from the National Institute of Health and Care Excellence (NICE) states that thrombolysis should be offered to patients with pelvic DVT. Overall, we would hope to reduce your risk of developing post-thrombotic syndrome over the next two years by about 20-30% by undertaking thrombolysis.

Are there any risks?

The main risk with thrombolysis is of causing bleeding. While most of the 'clot busting' drug stays in the clot, some inevitably leaks into your circulation and can cause unwanted bleeding. The risk of haemorrhage needing either blood transfusion or another treatment is about 5%.

Bleeding can occur into the brain causing a disabling stroke in 1 in 100 patients. Rarely (in about 1 in 200 people) this is fatal. The risk of bleeding complication increases with age and younger patients are at lower risk.

Minor bleeding at the puncture site or elsewhere is usually simple to manage.

Finally there is a small risk of allergic reaction to x-ray dye though severe reaction is very uncommon (less than 1 in 5000).

Overall the risk of a major complication is low.

What are the alternatives?

Treatment with blood thinning medication alone, initially as injections and thereafter with tablets. This is usually necessary for six months though some patients are advised to take it lifelong.

If you decide to have thrombolysis we would thin your blood in the same way for at least six months.

That's a lot to think about. How do I decide if I would like to proceed with thrombolysis?

Some people fear the risks of the treatment and would rather manage any symptoms of post-thrombotic syndrome as and when they appear. Other patients would rather accept the 'up-front' risks of thrombolysis in the knowledge that everything was done to lower the risk of post-thrombotic syndrome.

Everyone is different and it is important you have a full and frank discussion with your treating doctors so you are happy with whatever decision you end up making. Unfortunately, there is no simple 'right answer' and it comes down to how you feel about the risks of the thrombolysis treatment against the increased risk of post-thrombotic syndrome without it.

If you decide to proceed, the treatment needs to take place within 14 days of the clot occurring, while it is still soft.

Do I need to make any special preparations?

Thrombolysis and stenting is performed as an inpatient

You remain in bed for the duration of the procedure, which can last several days. The catheters do not hurt, but will feel a little odd at the skin puncture site. The hardest part from your point of view will be boredom. It is useful to have some books or a tablet or laptop to keep you occupied!

If you have any allergies or have previously had a reaction to the dye (contrast agent), you must tell the radiology staff before the procedure. It is also important to let them know if you have ever had unexplained bleeding or a stroke and whether you have had any surgery in the last six months.

Who will I see?

We will transfer you to the care of a vascular surgeon at Leeds General Infirmary. You will initially be admitted to a vascular surgery ward.

The procedure is carried out by a specially trained team led by an interventional radiologist. Interventional radiologists are doctors with special expertise in using medical imaging techniques to undertake procedures via tiny needle holes in the skin.

In most circumstances you will be seen on a ward by an interventional radiologist or a vascular surgeon to discuss the procedure well in advance. This will help you understand the process, gives you an opportunity to ask any questions and allows you time to consider whether you wish to have the procedure.

What happens before and during thrombolysis and stenting?

You will receive blood thinning medication to prevent the clot getting bigger. We will also arrange some scans to give us more detailed information about the size and extent of your clot.

On the day of the procedure you will need to put on a hospital gown. A small plastic tube will be placed in your arm in case you need an injection of a painkiller or sedative.

Because of the risks of bleeding you will need to be moved to a high dependency or intensive care ward where staffing levels allow regular assessment of you. Some patients need a urine catheter inserted into their bladder.

Once you are ready we will bring you to the procedure room in radiology (the angiography suite). The skin over the planned puncture site will be cleaned - this may be at your leg, groin or neck, depending on where the blood clot extends to. Local anaesthetic will be injected to numb the skin. A fine plastic tube, called a catheter, will then be placed into the vein and will be passed into the clot. You may be asked to hold your breath for a few seconds while images are taken.

In a small number of people we need to insert a small metal filter above the clot to prevent it breaking free and passing to the lungs. This is usually done through another small puncture into a vein in the neck.

Once the catheter is in the clot you will be returned to the high-dependency ward where you will normally stay for a few days while the 'clot busting' medication is infused. You will then come back down to radiology to check the result.

If we identify a narrowing in the vein, a small balloon is inserted via the fine tube at the puncture site and is inflated in the narrowing. Once the vein is stretched up one or more stents are inserted (also through the same tube) to hold it open. At the end of the procedure someone will press on the skin over the puncture site for 10-15 minutes.

If you have had a filter inserted we will remove it.

You will be returned to the ward with special devices called 'FlowTron boots' on your calves – these compress the calf at regular periods and ensure bloodflow is maintained through the stents.



You will be encouraged to get up and walk about the next morning and most people go home the same day or the next day.

Will it hurt?

At the start of the procedure the local anaesthetic stings for a minute or two. The catheters do not hurt though will feel a little strange. Inflation of the balloon in a narrowing can be painful – though you will be given powerful painkillers

and can have gas-and-air to breathe if you wish. Occasionally patients experience a dull back ache for a few days after stents have been inserted. This can be treated with simple pain killers.

What happens afterwards

You will be started on a blood thinning (anticoagulant) injection immediately the procedure has finished. These continue once a day until we can get your blood thinned on oral medication. You will need to have your blood thinned for six months. Some people need lifelong blood thinning.

The blood thinning medication is managed as an outpatient via a unit called JAMA which is close to A&E at St James' Hospital. You will need to go there the morning after you are discharged from hospital and several times a week for 2-3 weeks after that so we can get the oral blood thinning medication dose correct.

We will make an outpatient appointment with the orthotic department for you to be fitted with some compression stockings. These are effective at controlling symptoms in the affected leg and we would encourage you to wear them as much as possible. Compression stockings are not the same as the stockings provided on the ward (which are called TED stockings) and it is important you keep this appointment. Please contact radiology theatres (telephone number on the next page) if you have not received an appointment within two weeks of going home.

We will arrange ultrasound scans of the stents the day after the procedure and at two weeks, six weeks and six months.

We will also see you in vascular radiology clinic at LGI at six weeks and six months and in a medical clinic at St. James' hospital at three months. We try to make sure clinic and ultrasound appointments are on the same day.

Finally

We hope some of your questions should have been answered by this leaflet. An interventional radiologist or vascular surgeon will discuss it with you on the ward and again immediately before the procedure and you will have the opportunity to ask questions. Please make sure you are satisfied that you have received enough information about the procedure before you agree to proceed.

Contact details

Radiology theatres secretaries:

0113 392 3504

Vascular surgery ward:

0113 392 7415

JAMA:

0113 206 6961

Acute medicine virtual ward:

leedsth-tr.vamu@nhs.net

Or telephone Leeds Teaching Hospitals switchboard:

(0113) 243 3144.

Ask to speak to secretary of the consultant vascular surgeon or interventional radiologist in charge of your care.



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