The Oxford Kidney Unit

Access for haemodialysis

Part 3 – Keeping your fistula or graft working well
How to keep your fistula or graft working well if you are on dialysis

To keep your fistula healthy and functioning well, one of the dialysis nurses will assess it every time you come to the dialysis unit. This involves checking it is working well, by feeling for the ‘buzz’ (thrill) and listening with a stethoscope for the ‘whooshing’ (bruit).

They will report any problems you may have to the Vascular Access team. This is very important, as it allows us to identify potential problems early on and act upon them quickly.

What problems may I experience with my fistula or graft on dialysis?

• You may experience a rise in the pressure of the venous chamber or arterial chamber on the dialysis machine (the pressure to and from your fistula or graft); this can cause the dialysis machine to alarm frequently.
• Difficulty inserting needles into your fistula or blood clots in the needle.
• Your fistula or graft taking longer than 10-15 minutes to stop bleeding, once the needles are removed after dialysis.

All of these are usually due to a narrowing within the fistula vein. Please see later on in the leaflet for more information.
How do the nurses know if my fistula is working properly when on dialysis?

Your haemodialysis nurse will perform a special ultrasound with a ‘Transonic’ machine. A transonic machine measures the amount of blood flowing through your fistula with sensors attached to your dialysis lines as you dialyse. This will be performed every 3 months.

A transonic flow reading of 600mililitres per minute or more is good. If the number falls below 600mililitres per minute your Vascular Access nurse may need to refer you to the X-ray department (radiology), so that they can have a look inside your fistula or graft. Your dialysis or Vascular Access nurse will talk to you about referring you to the radiology department.

If you are not on dialysis and your pre-dialysis nurse or Vascular Access nurse thinks your fistula is not working as well as it should be, they will also refer you to radiology.
What will happen when I go to radiology?

*Please contact the radiology department prior to your appointment if you have an allergy to X-ray contrast or iodine, as you may not be able to have X-ray images taken.*

Your Vascular Access nurse will talk to you about which procedure you will be having.

What happens if I need a fistulagram?

You don’t need to make any changes to your medications. You can eat and drink as you normally would and go home immediately after your appointment.

What is a fistulagram?

During a fistulagram a small injection of a dye (contrast) is injected into the vein of your fistula. An X-ray camera is then positioned over your fistula or graft and pictures are taken, so that the radiologist can look closely at your veins. The Vascular Access nurse or your pre-dialysis nurse (if you are not on dialysis) will discuss the results with you and what the next plan is.
What happens if I need a venoplasty?

You will be asked to come to the Renal Day Case Unit. If you are taking any blood thinning medications such as warfarin, aspirin or clopidogrel, or diabetic medication such as metformin, please phone the Renal Day Case Unit for advice (the number is on page 9 of this leaflet).

You can eat and drink as normal before you arrive. You cannot drive after the procedure, so will need to have someone to take you home. Please do not arrange to go home on public transport. Travelling by car will be more comfortable for you and also quicker for you to return to the hospital if there are any complications on the journey home.

If you need to arrange hospital transport, please phone the Renal Day Case Unit.

When you get to the Renal Day Case Unit the following will happen:

- Your blood clotting levels (and INR if you are on warfarin) will be checked, to make sure they are at a safe level for the procedure to go ahead.
- You will be advised not to eat anything once you arrive on the unit, but you can have water up to an hour before the procedure.
- We will ask you what medications you are taking, including over the counter and herbal remedies.
- A cannula (a small plastic tube) will be inserted into your vein (usually in the back of your hand).
- If you are diabetic, your blood sugar will be checked.

We will ask you to change into a hospital gown and you will be collected by our porters to be taken down for the procedure.
What is a venoplasty?

A venoplasty is a procedure to treat a blockage or narrowing in your fistula or graft. You will require a local anesthetic injection for this procedure. This is a small injection of a solution, which will numb your skin and tissue near the start of your fistula or graft.

During a venoplasty, a small cut is made at the start of your fistula or graft. A small amount of dye (contrast) is injected in the fistula or graft, so that the radiologist can see on the X-ray images where the narrowing is in your vein. You may experience a warm feeling when the dye is injected into your vein.

A small deflated balloon is then inserted into the vein and inflated at the point where your vein narrows. This should widen the vein. It may feel slightly uncomfortable, but this should pass quickly. Sometimes, if your vein is very narrow, the radiologist may need to inflate the balloon several times.

Once the procedure is finished, the radiologist will place a stitch in the cut to close it. If you are on dialysis your nurse will remove the stitch at your next dialysis session. If you are not on dialysis the radiology department will talk to you about the best person to remove the stitch (this may be your local practice nurse).

Instead of a venoplasty, the radiologists may decide to insert a stent into the narrowing of your vein. A stent is a small metallic mesh which holds the wall of the vein open. It gets inserted in the same way as having a venoplasty. Once it is in place, you shouldn’t be able to feel it and your dialysis needles can be inserted as normal.

Both procedures take about an hour. You may need to stay on the Renal Day Case Unit for about 1-2 hours after the procedure, to make sure you don’t bleed (this is very rare). If we have concerns about you, a doctor will see you before you go home.
If you are worried about your venoplasty site when you are at home, please contact the renal ward (number at the back of this leaflet). If you notice that you have bleeding through the dressing, please press hard over the site and wait for 15 minutes. If blood continues to ooze through the dressing despite applying pressure, please phone the renal ward for further advice. If you are experiencing severe bleeding (very rare) and pressure doesn’t stop the blood loss, please phone 999.

**How will I know if the procedure has worked?**

Your dialysis nurse will repeat a Transonic reading to see if the procedure has improved the blood flow within your fistula or graft. About 90% of the time venoplasties are very successful. Sometimes the narrowing may come back again. If this happens, we will talk to you about having another venoplasty or stent.

Some people need frequent venoplasties to keep their fistula working properly. If you need frequent venoplasties, the Vascular Access team will refer you to see your surgeon in the Access clinic.

**Where can I find more information?**

If you would like any further information, the following websites may be helpful:

**Oxford Kidney Unit**
www.ouh.nhs.uk/oku/

**NHS Choices**
www.nhs.uk/Conditions/Dialysis/Pages/How-haemodialysis-is-performed.aspx#haemodialysis
Useful contact numbers

**Specialist Access Nurses**
Tel: 01865 225 910 or 01865 225 373  
(Monday to Friday, 8.00am to 5.00pm)

**Main Haemodialysis Unit**
Tel: 01865 225 807  
(Monday to Saturday, 7.30am to 7.00pm)

**Tarver Haemodialysis Unit**
Tel: 01865 225 487  
(Monday to Saturday, 7.30am to 7.00pm)

**Renal Ward**
Tel: 01865 225 780 or 01865 225 790  
(24 hours a day)

**Radiology Department**
Tel: 01865 235 755  
(Monday to Friday, 8.00am to 5.00pm)
If you have a specific requirement, need an interpreter, a document in Easy Read, another language, large print, Braille or audio version, please call 01865 221 473 or email PALS@ouh.nhs.uk