

Fistulogram, fistuloplasty and venoplasty

Radiology Department Patient Information Leaflet

Introduction

This leaflet tells you about having a fistulogram, fistuloplasty or venoplasty. It explains what is involved and what the possible risks are. It is not meant to replace informed discussion between you and your doctor, but can act as a starting point for such discussions. If you have any questions about the procedure, please ask the doctor who has referred you or the department which is going to perform it.

What is a fistulogram?

This is an examination of the blood vessels that make up your fistula. A small needle is placed in your fistula and dye (contrast agent) is injected. This dye provides an image (like a map) of the blood vessels that would otherwise be invisible on X-ray. The interventional radiologist interprets the images.

What is a fistuloplasty, venoplasty and stent?

Occasionally, the blood vessels that make up a fistula can develop a narrowing which is diagnosed with a fistulogram. A special balloon called an angioplasty balloon is introduced into the area of narrowing inside the fistula. This balloon is inflated from outside the body momentarily and then deflated to improve the narrowing. A completion fistulogram is then carried out to check the result. If this is in the fistula, it is called a fistuloplasty, and if it is in a central vein, it is called a venoplasty.

Very rarely, a special metal tube called a stent is inserted into the fistula. This is permanent and keeps the narrowing open. Stents are generally only used if the balloon does not improve the narrowing satisfactorily or if there is a complication.

Why do you need a fistulogram?

Your doctor feels that there may be a problem with your dialysis fistula (or graft). This test is the best way to diagnose the problem associated with your fistula. You may already have had a Doppler ultrasound scan to assess the flow in your fistula to help decide how to approach this problem.

What are the risks of a fistulogram?

Fistulograms are very safe procedures, but there are some risks and complications that can occur. Very occasionally, a small bruise can appear at the site of needle puncture. Less commonly, ongoing bleeding in this area leads to a short inpatient stay (one or two in every 100). Very rarely, damage to the fistula can occur that may require further treatment by the interventional radiologist or a small operation. The risk of infection is very low.

What are the risks of a fistuloplasty/venoplasty?

Fistuloplasty/venoplasty, like a fistulogram, is very safe, but occasionally complications do arise. A fistulogram is often performed before a fistuloplasty.

There is a small risk of failure of treatment. Sometimes, the narrowing in a fistula does not respond well to the fistuloplasty/venoplasty and requires a stent.

The risk of bleeding is slightly higher than for a fistulogram (about three in every 100). There is a small risk that the treatment may damage or even rupture the fistula/vein. If this were to happen, the fistula may fail and could not be used for dialysis. A small operation may be required at the time, but more likely a line would be placed and a new fistula fashioned. When considering this risk, it is important to bear in mind that leaving a narrowing in a fistula or vein without treatment could result in your fistula failing.

Who has made the decision?

Your doctors, the vascular access nurse and the interventional radiologist will have discussed your care and feel that this is the most appropriate next step. However, you will also have the opportunity for your opinion to be considered and if, after discussion with your doctors, you no longer want the procedure, you can decide against it.

Are you required to make any special preparations?

Fistulograms are performed as an outpatient. However, if you require a fistuloplasty or venoplasty, you may be admitted as a day case and asked not to eat or drink for four hours before the procedure. If you have any allergies or have previously had a reaction to the dye (contrast agent), you **must** tell the radiology staff before you have the test.

Who will you see?

You will be seen by a specially trained team led by an interventional radiologist within the radiology department. Interventional radiologists have special expertise in reading the images and using imaging to guide catheters and wires to aid diagnosis and treatment.

Where will the procedure take place?

The procedure will take place in the angiography suite or theatre. This is usually located within the radiology department. This is similar to an operating theatre, into which specialised X-ray equipment has been installed.

What happens during a fistulogram, fistuloplasty or venoplasty?

You will be asked to get undressed and put on a hospital gown. A small needle may be placed in your non-fistula arm in case you need an injection of a painkiller or light sedative. You will be asked to lie flat on your back. The skin over the area of your fistula will be swabbed with an antiseptic and you will be covered with sterile drapes. Local anaesthetic will be injected into the skin.

A needle, often followed by a fine plastic tube, will then be placed in the fistula and dye injected. You will be asked to hold your breath for a few seconds while the images are taken. If you have a fistuloplasty or venoplasty, you will have monitoring devices placed on your chest and on your finger and, if a sedative is given, you will be given oxygen via a face mask.

Occasionally, it may be necessary to place a fine plastic tube in the vein in your groin, as all the veins inside your body are connected and treatment is sometimes carried out via the groin vein. This may be a safer option than directly through the fistula.

Will it hurt?

The local anaesthetic will sting initially, but this soon passes. Occasionally, when the balloon is inflated during fistuloplasty, a dull ache may occur, but this passes when the balloon is deflated.

How long will it take?

Every patient is different, and it is not always easy to predict. However, expect to be in the radiology department for around 15 to 20 minutes for a fistulogram, and up to an hour for a fistuloplasty or venoplasty.

What happens afterwards?

Light pressure is applied for a few minutes to the region where the needle/plastic tube was placed to prevent bleeding. You can usually go home 30 minutes after a fistulogram, but will need to stay in hospital for a few hours following fistuloplasty or venoplasty. A follow-up fistulogram will usually be required after one month. You will receive this appointment in the post.

X-ray precautions

The procedure uses X-rays, and these use a small amount of radiation which may add slightly to the normal risk of cancer. Your doctor thinks that the benefit of the examination outweighs the risks. However, if you are concerned about these possible risks, please discuss these with this doctor.

For more information visit:

<https://www.gov.uk/government/publications/medical-radiation-patient-doses/patient-dose-information-guidance>

If you are a female patient, you must tell us if you are or might be pregnant before you attend for your scan.

Finally

Some of your questions should have been answered by this leaflet, but remember that this is only a starting point for discussion about your treatment with the doctors looking after you. Make sure you are satisfied that you have received enough information about the procedure.

Contact

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If you have any questions, or if there is anything you do not understand about this leaflet, please contact:

The Radiology Department

Russells Hall Hospital switchboard number: 01384 456111

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<http://dgft.nhs.uk/services-and-wards/radiology>

If you have any feedback on this patient information leaflet, please email dgft.patient.information@nhs.net

This leaflet can be made available in large print, audio version and in other languages, please call 0800 073 0510.

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