Insertion of a Haemodialysis Catheter

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Introduction

This leaflet is about the procedure required to put in a temporary dialysis catheter. It is intended to give you the information you need before you agree to have the procedure performed. It does not replace discussion between you and your doctor or the renal access specialist nurse. Please ask all the questions you need to be sure that you fully understand what is involved.

What is a temporary dialysis catheter and why do I need it?

For a dialysis machine to work, there needs to be a way of taking blood from you to pump it into the kidney machine. A temporary catheter (also called a line) is one way of doing this and it can be used rapidly. The catheter is placed through the skin into one of the large veins in the neck or in the groin at the top of the thigh. Temporary catheters are used when it is likely that a catheter will only be needed for a couple of weeks at most or when it is important to start dialysis quickly and plan a more permanent solution at a later date.

Who will insert the catheter and where will it be done?

A kidney specialist (Consultant) or a trainee kidney specialist (Specialist Registrar) or a specially trained nurse will do the procedure. The operator performing the procedure may be different to the person who recommended the procedure to you, but they will be happy to answer your questions. It will be done in the Minor Operations room in the Renal Unit at Southmead Hospital. It is performed under local anaesthetic so you will remain awake. You can eat and drink before and after the dialysis line is put into the vein.
Will I need any blood tests?
Blood tests will be carried out to check that your blood will clot properly after the procedure.

What will happen during insertion of the temporary dialysis catheter?
You will lie on a trolley or on a hospital bed as flat as you comfortably can. To keep everything sterile, the operator inserting the catheter will wear a cap, mask, sterile surgeon’s gown and gloves. The skin over the veins in the neck or the groin will be cleaned with antiseptic and then covered by a large sterile drape. Some local anaesthetic is injected into the skin; this may sting a little at first. Once the skin is numb, more local anaesthetic is injected around the vein. The doctor/nurse will find the exact position of the vein using an ultrasound scan and will then insert a special needle through the numb skin into the vein. The doctor/nurse will then pass a thin wire through the needle into the vein and the needle will be removed. The dialysis line is then placed through the skin and into the vein by passing it over the wire. Once the dialysis line has been put in, the wire is removed and the line is held in place by a stitch in the skin.

How long will it take?
It is not possible to predict exactly how simple or complicated the procedure will be for each individual patient. This is influenced by how easy it is to identify the vein and pass the guide wire down into it. Usually the whole procedure will take 20-30 minutes.

Will it hurt?
When the local anaesthetic is injected, it will probably sting to begin with, but this soon wears off and the area will feel numb. You will feel pressure as the catheter is pushed under the skin and when it is pushed into the vein. When the local anaesthetic
has worn off, the shoulder and side of the neck or groin may feel rather tender and bruised.

**What will happen afterwards?**

When the procedure is over and if the dialysis line has been placed into the neck vein, a chest X-ray is taken to check that the catheter is in the correct position and that there have been no complications. You may be able to go home straight after the X-ray if you come in as an outpatient. Sometimes, there is some oozing of blood and you will need to stay until the bleeding has stopped. Occasionally, this means that you need to stay in hospital overnight.

It is important to keep a dressing over where the catheter comes out of the skin (the catheter ‘exit site’). This area should be kept clean and dry. The dressing will be changed at least twice a week during your dialysis treatment. You should avoid getting this area wet when washing.

**If you develop severe pain or bleeding around the dialysis line, you should contact us straight away for advice. If the bleeding persists you need to press over the area with a clean hand towel or handkerchief and seek help straight away.**

**Are there any risks or complications?**

Having a temporary dialysis catheter inserted is considered a safe procedure but, as with any medical treatment, complications can occur.

The most common complication is bleeding from the catheter exit site. This can be stopped by applying pressure to the area and is not dangerous. Sometimes it can take an hour or even longer to stop bleeding.

Occasionally, an artery in the neck or groin may be injured while the catheter is being inserted. Usually the injury is minor and any bleeding can be stopped by pressing on the side of the neck or
groin. There may be some swelling and bruising that means that the operator will have to stop the procedure and plan to try again once the bruising has settled.

It is important that you tell your doctor or nurse if you have problems with easy bleeding or bruising, or if you are taking tablets that can affect bleeding, such as aspirin, warfarin, dipyridamole or clopidogrel.

Very serious complications are rare but you should be aware that they could happen:

- The vein into which the catheter is being inserted can be damaged or torn. This could result in internal bleeding in the chest. If this occurs, additional treatment would be needed: this could require insertion of a tube into the chest (a ‘chest drain’) to remove the blood, or even an operation.

- It is possible to damage the lung on the side that the catheter is being inserted. If the lung is damaged, it may collapse, making you breathless and cough. You may need another procedure (possibly insertion of a chest drain, as above) to allow it to expand again.

The chance of experiencing one of these serious complications is small (less than 1 in every 100 catheters inserted). Everything is done to minimise the risk and death as a result of a complication is extremely rare.

Once the catheter is successfully in place, the main complications are blockage of the catheter by blood clot or infection. A blocked catheter may need to be removed and replaced. An infected catheter must be removed as quickly as possible. If the catheter is not removed, the blood may carry infection to other parts of the body such as the heart valves or bones. Signs of infection are fever, flu-like symptoms and shivering. You should report these symptoms immediately to a doctor or nurse in the Renal Unit.

To reduce the risk of infection, personal hygiene and proper care of your line are essential. Your dialysis nurses will discuss this with
you in more detail.

Finally…

We hope that you have found this information leaflet helpful. Please feel free to ask the doctor/nurse inserting the catheter as many questions as you need to. You should feel satisfied that you have received enough information about the procedure before you sign a consent form.

To contact us:

If you have any queries or concerns about the procedure, or have not understood anything you have been told, please do not hesitate to ring us.
References


NHS Constitution. Information on your rights and responsibilities. Available at www.nhs.uk/aboutnhs/constitution
If you or the individual you are caring for need support reading this leaflet please ask a member of staff for advice.

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