Urokinase (Syner-KINASE®)
Information for Patients

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Introduction

This leaflet has been written to give you information about the use of Urokinase solution for haemodialysis lines.

What is Urokinase and what is it used for?

Urokinase is a medicine that helps to dissolve blood clots that can form in or around the tip of your haemodialysis line.

If a blood clot forms inside or around your line, the speed your blood flows in and out of the line will become slower. In some cases a blood clot can cause the line to become blocked and if this happens there will be no blood flow from the line. If the blood flow through your line becomes slow or stops altogether, the nurses will be unable to put you on dialysis.

To help get your dialysis started it is important to get the blood flowing freely in and out of your line. About 300mls (or about half a pint) of blood needs to be pumped through the line each minute for dialysis.

Urokinase will be used to try to unblock your line and improve the speed of the blood flow through it.

Urokinase is a white powder which comes in a small bottle (vial). The powder is dissolved in saline (a water and salt solution) before it is placed into the haemodialysis line.

Why do I need a good blood flow?

The quality of your dialysis treatment is affected by the speed of the blood flow in and out of your line. If the blood flow speed is less than 300mls each minute the dialysis machine will not be able to clean your blood as well as it should. This will cause waste products to build up in your body and you will start to feel unwell.

To keep you as well as possible it is important to clean your
blood and remove as much waste as possible.

How is Urokinase used?
Urokinase solution can be given in a number of ways:
• short dwell lock (1st step)
• high dose infusion off dialysis
• infusion during your dialysis treatment
The short dwell lock involves putting Urokinase solution directly into each end (lumen) of your haemodialysis line. The volume of solution placed in the lumen is just enough to fill the line. The solution is then left inside the line for 45-60 minutes. It is called a short dwell lock as the solution stays locked in the line for a period of time.

After 45-60 minutes a nurse will remove the Urokinase solution from your line and will use syringes to flush each lumen with saline. The nurse will decide whether the blood flow through the line has improved enough for you to be able to go onto dialysis.

If the blood flow through the line has improved the nurse will start your dialysis session.

What will happen if my line still does not work properly?
If the blood flow in and out of the haemodialysis line is still slow the nurse will get advice from one of the kidney doctors. The doctor and nurse will talk with you and explain the options and agree the next steps. These may include:
• having another Urokinase short dwell lock put into the line
• having a X-ray to check the haemodialysis catheter is in the correct position and is not kinked
• giving you a higher dose of Urokinase which is pumped (infused) into your line over 90 minutes. This is given when the rate of the blood flow through the line is not enough to start dialysis. A special blood test to check how quick your blood is clotting is taken before the infusion. If the blood test shows the clotting is within a normal range then the infusion can start. The Urokinase infusion is normally given in either ward 301 or in ambulatory care at the Queen Elizabeth Hospital. If you have your dialysis at one of the satellite units you will need to come across to have the infusion. If the blood flow rate is restored you will be able to have your dialysis.

• taking a blood test to see whether you need your dialysis treatment as planned

• starting you on a low dose of Warfarin (to thin your blood)

Sometimes Urokinase may be given as an infusion during your dialysis session. This happens when the blood flow rate in and out of your line has increased enough to start your dialysis session but the flow rate still needs improving.

If your line still does not work and the blood test shows you need your dialysis treatment you will need to have a temporary haemodialysis line inserted so you can have your dialysis.

*Special instructions*

Your haemodialysis line should only be used for dialysis treatment. If your dialysis line does not work properly it may be necessary for staff in the Kidney Assessment Team to place a medicine called Urokinase directly into your line to improve the blood flow. A separate information leaflet about Urokinase is available.

If a doctor or nurse wishes to use the line for any other purpose then please refer them to your kidney nurse or doctor.
Are there any side effects of Urokinase?

Like all drugs Urokinase may cause side effects. With the short dwell lock, as the volume of solution stays locked in the line almost none of the drug gets into your bloodstream, so side effects are rare.

Possible side effects or signs of an allergic reaction to Urokinase are:

- skin rash
- feeling dizzy or faint
- dull back ache
- feeling warm
- wheezing and tightness of your chest
- slight bleeding

If you have any of these signs please let the nurse or doctor know.

If you have any questions or require further information please talk with one of the nurses or doctors.

Where can I find further sources of information?

Further information can be obtained from:

- The National Kidney Federation  
  www.kidney.org.uk/
- West Midlands Renal Network website  
  www.wmrn.co.uk
- Manufacturer’s patient information leaflet 
  www.syner-med.com/
- Go online and view NHS Choices website for more information about a wide range of health topics 
  www.nhs.uk/Pages/HomePage.aspx
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The Trust provides free monthly health talks on a variety of medical conditions and treatments. For more information visit www.uhb.nhs.uk or call 0121 627 7803

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