The Shrewsbury and Telford Hospital MHS

NHS Trust

Central Vascular Catheter (CVC) Lock Using Citra-lock TM(30%)

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1.0 **INTRODUCTION**

This document is written as a guide to instillation of Citra-lock 30% (sodium citrate) This has replaced Heparin as a catheter lock because of it's anti-microbial properties. The main component is Trisodium Citrate 30% and the solution is adjusted for pH.

The advantages of Sodium Citrate are reduced risk of infection and reduced need for replacement lines. It may also improve flow rates and reduce the need for Actilyse instillation or other line interventions e.g line stripping (artefact removal).

2.0 AIM / PURPOSE

This policy is to provide all staff members of the Shrewsbury and Telford Hospitals Renal departments including satellite units a clear and universal guideline in a safe and accurate haemodialysis catheter lock procedure using Citra-lock.

3.0 **OBJECTIVES**

1. All staff to be aware of safe locking procedures for dialysis catheters.

2. To reduce the risk of line sepsis and hence reduce risk of patient mortality.

3. To reduce the rate of line failure from poor blood flows. This should be carried out in conjunction with the Renal Unit Blood Flow policy Sept 2010. This in return will improve URR as well as reduce invasive intervention.

4.0 SPECIFIC DETAIL

This policy applies to all **temporary and permanent** catheters used on SaTH Renal Units.

- Aseptic technique must be used at all times when accessing dialysis catheters.
- Dialysis catheters must only be accessed by renal and nephrology staff who have been competency assessed.
- Dialysis catheters are used for dialysis only unless there is an emergency situation or no alternative access is available.
- If catheter NOT being used then must be aspirated, flushed and Citra-locked weekly to ensure patency.

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Citra-lock side effects

Immediately after Citra-lock is introduced into the catheter the patient may complain of a metallic taste in the mouth or tingling in the fingers. These side effects should disappear within a minute and can be a sign that the catheter volume was exceeded and the solution has passed into the bloodstream. These side effects are clinically harmless but this must be explained to the patient prior to administration. Decreasing the volume slightly for the next instillation will reduce these side effects – **DOUBLE CHECK THE VOLUME LOCK ON EACH LIMB.**

Equipment: (Ideally luer lock syringes should be used in all occassions)

Clean trolley	Sani- cloth- Alcholol wipes
Neckline pack	5ml syringes x 2
Sterile gloves x2	2ml syringes x2
10ml syringes x 2	Obturators x 2
Green needle	Citralock
0.9% sodium chloride 10ml x 2	Gauze and micropore tape

Procedure in detail:

On commencing dialysis

Note the locking volume of the catheter. Refer to dialysis prescription and drug prescription.

Explain to the patient about possible side effects (see above). Explain that these will resolve very quickly and the volume can be reduced next time to minimise these effects.

- Aspirating Citra-lock prior to using line aspirate 5 mls of blood from each lumen and discard.
- Flush each lumen with 10ml sodium chloride 0.9% to ensure adequate blood flow.

If unable to aspirate catheter lock solution:

- Attempt to <u>INJECT INTO THE PATIENT SLOWLY</u> (over 20-30 seconds) using 10ml 0.9% sodium chloride solution.
- If unable to aspirate from both lumens, leave 5 minutes between injecting the first lumen before slowly injecting the second lumen.
- If both lumens are now aspirating connect as normal to dialysis
- If one lumen remains occluded but flushes easily, reverse line connections and proceed with dialysis.
- If both lumes remain occluded, refer to TPA policy and refer patient to vascular access nurse.

Locking the catheter post dialysis.

Follow Dialysis Catheter take off Procedure.

- Flush each lumen with 10ml sodium chloride 0.9%.
- Draw up exact volume of Citra-lock required for each lumen into two 2ml syringes. This volume will be based upon the priming volumes (Arterial & Venous limbs) detailed on the catheter plus any adjustments made previously for this particular patient. Do NOT draw back prior to instilling the Citralock solution.

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- Explain to the patient about possible side effects. Explain that these will resolve very quickly and the volume can be reduced next time to minimise these effects.
- Instill Citra-lock solution into each catheter lumen.
 It is important that the solution is introduced into the catheter slowly, taking <u>8-10</u>
 <u>Seconds</u> for each lumen. This ensures that the solution does not 'shoot' out of the end of the catheter but gently pushes the blood back down the catheter into the vein leaving the catheter full of Citra-lock.
- Replace line obturators.
- Record administration on prescription sheet. Dialysis assistants to obtain counter signature from registered nurse.

Additional Information

When a patient returns for dialysis the Citra-lock solution that you aspirate may well be coloured Pink, Red or Brown. This is quite normal and not clinically significant.

It should be noted that blood samples contaminated with Citra-lock could give misleading readings regarding sodium concentrations and clotting screens.

Please note INR's and coagulating screens to be taken peripherally and NOT from dialysis catheters.

5.0 TRAINING

All staff to read policy and be formally aware of the change to locking procedures prior to a universal implementation date.

All new staff should be aware of the locking procedure and be competency assessed.

An experienced sister should be contacted if any staff member is unsure regarding their locking procedure practice.

6.0 AUDIT

Monthly line audits to be carried out as per IPC policy to check corret procedure is being followed.

7.0 **REFERENCES**

- 1. Citra-lock Catheter Lock Solution- Synermed.
- 2. European Best Practice Guidelines.
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- 4. West Midlands guidelines: management of CVC in dialysis.

8.0 CONTRIBUTION LIST

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