



Catheter Related
Bacteremia
AND
Thrombosis



Catheter
Lock
Solution



DuraLock-C™

Catheter Lock Solution

Studies have demonstrated that Trisodium Citrate (TSC) is highly effective as a catheter locking solution.^(1,2,3,4) In addition to being an anticoagulant, TSC has demonstrated antibacterial activity across a broad spectrum of microbes.^(1,2) Another study, commenting on TSC's anticoagulant character, found a dramatically reduced incidence of thrombolytic intervention in tunneled hemodialysis catheters.⁽¹⁾

** Most importantly and most recently, Weijmer, et al⁽⁴⁾, in a multi-centered, prospective, randomized comparison with heparin and TSC, demonstrated clear superiority of TSC over heparin.*



• Luer Lock Connection

Catheter LOCK Solution



FEATURES AND BENEFITS

- **Anticoagulant / Antibacterial** - Fewer catheter withdrawals due to complications.
- **Safety** - Lower rate of catheter related bacteremia.
- **Needleless draw/luer lock termination** - Convenient to the care giver and safer to prepare.
- **Dating (24 months)** - Greater shelf life.

| Key Findings <i>(*Weijmer, et al⁴)</i> | TSC (30%) | Heparin (5,000 units) |
|--|-----------|-----------------------|
| Catheter withdrawn due to complications | 28% | 46% |
| Catheter related bacteremia per 1,000 patient days | 1.1% | 4.1% |
| Deaths due to catheter related bacteremia | 0 | 5 |

DuraLock-C™

A. DuraLock-C™ greatly reduces systemic infections and the need to use Urokinase. In a recent 18 month study by Ash et al,⁽¹⁾ the type of catheter lock solution used for all 40 dialysis patients with tunneled lines was changed every 3-4 months, starting with Heparin.

B. During this study the number of vials of Urokinase used to unclot the catheters was monitored. The results are as follows:

| | | LOCKING SOLUTION | | | |
|--------------------------|--|------------------|--------------------------|--------------------------|---------------------|
| | | Heparin | Citrate 10% & Gentamicin | Citrate 20% & Gentamicin | Citrate 46.7% ALONE |
| A. Anti-Bacterial | 40 Hemodialysis Catheters | | | | |
| | % Bacteremia Episodes per month | 4.32 | 2.74 | 1.68 | 0 |
| B. Anti-Coagulant | 40 Hemodialysis Catheters | | | | |
| | # of Urokinase Interventions per month | >40 | >30 | <20 | <3 |

This chart shows a complete reduction in catheter related bacteremia as well as a near elimination of the necessity to use Urokinase during the 46.7% trisodium citrate lock test period.

ORDERING INFORMATION

DuraLock-C™ CATHETER LOCK SOLUTION

| | |
|------------------------------|---------|
| 1 Box of 360 vials 46.7% TSC | XDLC546 |
|------------------------------|---------|

Packed in boxes of 360 vials.
Each vial contains 5cc of Trisodium Citrate 46.7%

| | |
|----------------------------|---------|
| 1 Box of 360 vials 30% TSC | XDLC530 |
|----------------------------|---------|

Packed in boxes of 360 vials.
Each vial contains 5cc of Trisodium Citrate 30%

REFERENCES

1. Ash SR, Mankus RA, Sutton JM, Criswell RE, Crull CC, Velasquez KA, Smeltzer BD, Ing TS: Concentrated sodium citrate (23%) for catheter lock. Hemodial Int 4: 22-31, 2000
2. Weijmer MC, Debets-Ossenkopp YJ, van de Vondervoort FJ, ter Wee PM: Superior antimicrobial activity of trisodium citrate over heparin for catheter locking. Nephrol Dial Transplant 17:2189-2195, 2002
3. Bayés B, Bonal J, Romero R: Sodium citrate for filling haemodialysis catheters. Nephrol Dial Transplant 14: 2532-2533, 1999
4. Weijmer MC, et al: Randomized, clinical trial comparison of trisodium citrate 30% and heparin as catheter-locking solution in hemodialysis patients. J. Am. Soc. Nephrol., 16: 2769 – 2777, 2005