



**NEPHROLOGY PROGRAM  
DEPARTMENT POLICIES AND PROCEDURES**

**Home Dialysis - Section 07 - Medication - HDU 7-01  
Instillation of Alteplase (rt-PA) for the Occluded Peritoneal Dialysis Catheter  
No.: 01446 (TOH Standardized Policy Number)**

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**ISSUED BY:**

Home Dialysis Unit / Clinical Practice  
Committee

**DATE OF APPROVAL:**

2015/02

**APPROVED BY:**

Program Clinical Lead and Division Head

**LAST REVIEW/REVISION DATE:**

N/A

**CATEGORY:**

Medication

**IMPLEMENTATION DATE:**

2015/02

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**POLICY AND BACKGROUND STATEMENTS:**

- Alteplase is a tissue plasminogen activator (rt-PA) (Cathflo®), which is used to restore patency to peritoneal dialysis (PD) catheters obstructed by fibrin. It is the physician's responsibility to determine if Alteplase is an appropriate treatment for individual patients
- A physician's order is required for the intra-peritoneal instillation of Alteplase and the order must specify the dose to be given and the length of time the medication should dwell in the catheter
- Alteplase is supplied as Cathflo (2mg/2ml) vial. Cathflo must be stored in the refrigerator. Once reconstituted, the solution is stable for 8 hours at room temperature

**DEFINITION(S):** N/A

**ALERTS:**

- This procedure can be done by RNs in the Home Dialysis Unit (HDU) or by RNs on the in-patient nephrology unit (7NW)
  - Prior to considering using Alteplase for occluded PD catheter, ensure the following assessments or actions have been undertaken
1. Assess for the following potential causes of poor drain and fill:
    - Constipation
    - Kinked tubing
    - Closed clamps
    - Fibrin
    - Patient position
    - Catheter malposition (abdominal x-ray may be ordered)

2. After ruling out the above, in & out flushes using **500mL** (or volume as ordered) of **PD4 Dianeal 1.5% 2 liter** bag added with **Heparin 1000 units (500 units/liter)** may be attempted to relieve the occlusion
3. If in/out flushes are unsuccessful or not possible; in/out flushing (pushing and pulling) by aseptically attaching a 30 mL syringe filled with normal saline or Dianeal 1.5% may be also attempted to relieve the occlusion

#### EQUIPMENT:

Quantity	Product	Order #
<b>Step 1: Instillation of Alteplase (Cathflo®)</b>		
2	10 mL syringe	140515
1	3 mL syringe	140510
1	10 mL pre-filled 0.9% Sodium Chloride syringe or vial of 0.9% Sodium Chloride 10 mL	
10	Alcohol swabs	
5	Vials of 2 mg Alteplase (Cathflo®)	
2	18 gauge blunt fill needles	155645
2	Vials of Sterile Water	
1	Mini cap	
1	Medication label	
<b>Step 2: Checking the patency of PD catheter</b>		
1	10 mL syringe	
1	Warmed PD4 Dianeal 1.5% 2 liter twin bag	
1	10 mL Vial of Heparin 1000 units/mL	

#### PROCEDURE:

##### Step 1: Instillation of Alteplase (Cathflo®)

1. Obtain order from Nephrologist for Alteplase (rt-PA) instillation with the specific dose and length of time that Alteplase should dwell in the catheter
2. Collect all supplies, and explain the procedure to the patient
3. Perform hand hygiene, don mask
4. Using aseptic technique, reconstitute each vial of Alteplase with 2.2 mL sterile water using a 3 mL syringe (total of 5 vials)
5. Gently swirl the contents until the contents are dissolved. Slight foaming is not unusual. Do not shake. Resulting concentration is 1mg/mL
6. Draw up a total of 10mg of Alteplase (10mL) by using a 10 mL syringe and a new blunt needle
7. Label the syringe
8. Remove cap from PD catheter and discard

9. Aseptically attempt to aspirate the peritoneal catheter to remove heparin (if present) with an empty 10mL syringe. If heparin present but unable to aspirate, instill 0.9% Sodium Chloride 10mL to flush the PD catheter
10. Aseptically attach the 10 mL syringe with Alteplase to PD catheter and open twist clamp. Instill 7mL (7mg) of Alteplase into the PD catheter and close twist clamp
11. Instill 1 mL (1mg) of Alteplase further into the PD catheter every 15 minutes until the entire 10mL is used up
12. Close twist clamp and aseptically remove syringe and apply a new mini cap
13. Leave medication in overnight or as ordered. Note: Alteplase is usually left to dwell overnight, but there may be circumstances when a shorter dwell time is ordered (the minimum dwell time is one hour)
14. Document procedure in Nephrocare (HDU) or Integrated Progress Notes for admitted patients (7NW)

### **Step 2: Check the patency of PD catheter**

1. Aseptically apply an empty 10 mL syringe to the PD catheter and attempt to aspirate the medication
2. After aspirating the medication, perform two in/out flushes with **500mL of PD4 Dianeal 1.5% 2 liter bag added with Heparin 1000 units (500units/liter)**

**NOTE:** If unable to aspirate the medication or if in & out flushes are unsuccessful, contact Nephrologist/delegates for further instruction

### **RELATED POLICIES / LEGISLATION:**

1. Nephrology Policies and Procedures - [Hemodialysis - Section 07 - Medication - Neph 7-02 \(#01156\) Alteplase Instillations-Infusions Guidelines into Tunneled Hemodialysis Catheters](#)

### **REFERENCES:**

1. Zorzanello, M. M., Fleming, W. J., & Prowant, B. F. (2004). Use of tissue plasminogen activator in peritoneal dialysis catheters: A literature review and one center's experience. *Nephrology Nursing Journal*. 31(5). p. 534-537

### **COMMENTS / SIGNIFICANT REVISIONS: N/A**