

ALTEPLASE PROTOCOL

For Occluded Hemodialysis Central Venous Catheters

Weight (kg)

Bulleted orders are initiated by default, unless crossed out and initialed by the physician/prescriber. Boxed orders () require physician/prescriber check mark () to be initiated.

- Refer to *Alteplase in Occluded Hemodialysis Central Venous Catheters-Preparation and Administration Clinical Practice Standard and Procedure VAC0100 and Algorithm for Alteplase Use in Occluded Hemodialysis Central Venous Catheters (see back page)*
- Notify the physician if one or both lumens are still “sluggish” or blocked after administering alteplase twice on two separate occasions within a two week period or the patient is receiving inadequate dialysis.
- For catheter inserted date (new orders required for new catheter): _____

Check one or more of the following instillation methods:

If there is no flow or the blood pump speed is less than 200 mL/min:

SHORT DWELL METHOD

- Instill **alteplase 1 mg** into each catheter lumen.
****OR** IF THE 1 mg DOSE FAILS THEN**
- Instill **alteplase 2 mg** into each catheter lumen.
 - Add 0.9% sodium chloride to fill the internal volume of each lumen plus 0.2 mL overfill.
 - Leave the solution in the catheter for a minimum of 30 minutes and a maximum of 120 minutes (note: success may increase with longer durations), then withdraw the solution and clot(s) (may push the remaining alteplase if unable to withdraw). Forcefully flush each catheter lumen with 0.9% sodium chloride.

If blood pump speed is greater than 200 mL/min but less than 300 mL/min:

INFUSION METHOD

- Add **alteplase 2 mg** into 100 mL 0.9% sodium chloride infusion bag.
****OR** IF THE 2 mg DOSE FAILS THEN**
- Add **alteplase 4 mg** into 100 mL 0.9% sodium chloride infusion bag.
 - Commence alteplase infusion to run over 60 minutes.

OVERNIGHT DWELL METHOD

- Instill **alteplase 1 mg** into each catheter lumen.
****OR** IF THE 1 mg DOSE FAILS THEN**
- Instill **alteplase 2 mg** into each catheter lumen.
 - Add 0.9% sodium chloride to fill the internal volume of each lumen plus 0.2 mL overfill.
 - Leave the alteplase solution in the catheter until the next hemodialysis treatment.
 - Prior to start of next hemodialysis treatment, withdraw the solution and clot(s) (may push remaining alteplase if unable to withdraw). Forcefully flush each catheter lumen with 0.9% sodium chloride.

Resistant catheters and/or approaching last vascular access option: Instill once weekly as per overnight dwell method (prior to long stretch off dialysis)

- Instill **alteplase 1 mg** into each catheter lumen.
****OR** IF THE 1 mg DOSE FAILS THEN**
- Instill **alteplase 2 mg** into each catheter lumen.

Date (dd/mm/yyyy)	Time	Prescriber's Signature	Printed Name or College ID#
/ /			

Algorithm for Alteplase Use in Occluded Hemodialysis Central Venous Catheters

Prior to starting dialysis: Difficulty instilling or aspirating catheter lumens
 On dialysis: Blood pump speed (BPS) <300 mL/min or ↓ in blood flow of ≥ 20%

Prior to starting dialysis & having difficulty instilling or aspirating catheter lumens:

- Check for mechanical obstruction (e.g. kinks under catheter clamps or at exit site, patient's positioning)
- Forcefully flush 20 mL 0.9% sodium chloride into each lumen. If successful, attempt to aspirate blood & perform two to three additional forceful flushes with aspirated blood; **alteplase is not required**.

On dialysis & blood pump speed is inadequate:

- Check for mechanical obstruction of catheter (e.g. kinks under catheter clamps or at exit site, patient's positioning)
- Rule out mechanical problems
- Reverse lumens & increase blood pump speed to be as high as possible
- If malposition suspected, obtain order for CXR

