

Management of Occluded Implanted Port

PURPOSE

To restore patency to an occluded or partially occluded implanted port.

NOTE: Declotting an implanted port may be difficult. The following technique has been quite effective in clearing occluded ports. Two non-coring needles attached to syringes are inserted into the port. One syringe, which is empty, has the plunger down. The other syringe is filled with the thrombolytic agent. The empty syringe acts as a “vent”. By infusing the thrombolytic agent through the filled syringe, a rinsing of the portal chamber may be accomplished and solution will come in contact with the clot. When force is applied to the filled syringe, it will force the plunger of the other syringe back.

For a partial occlusion, (for example, unable to withdraw blood or catheter flush is sluggish) a single needle and syringe procedure may be used.

POLICY

1. An RN experienced in central line catheter care may declot an implanted port with a physician’s order.
2. An assessment of the infusion system must be done prior to the declotting procedure to rule out causes other than a clot for occlusion. These include:
 - a. Clamped or crimped tubing
 - b. Malpositioned or kinked catheter
 - c. Malfunctioning tubing, extensions, clogged needleless device or filter
 - d. Damaged catheter
 - e. Improper placement of non-coring needle
 - f. Occlusions caused by drug precipitate (for example calcium gluconate, phenytoin, diazepam, 3-in-1 TPN solutions) will not be resolved with the use of thrombolytic agents.
3. Usual indications for a dye study include:
 - a. Swelling at the catheter entrance
 - b. Swelling in the neck area or limb on the side of catheter placement
 - c. Symptoms of superior vena cava syndrome
 - d. Sensations of pain or burning along the insertion area or in the chest or neck
4. Aseptic technique shall be used for the declotting procedure; consideration should be given to the use of a mask.
5. Thrombolytic agents specifically indicated to dissolve clots shall be used.
6. Anti-air embolism precautions must be taken when entering the system.

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7. Forceful or rapid injection of the thrombolytic medication should be avoided since this could rupture the catheter or expel the clot into the circulation.
8. Monitor patient for signs and symptoms of adverse reactions during and immediately after the procedure. Report any suspected reaction to the physician.

EQUIPMENT

Liquid Soap (regular or antimicrobial) and sanitizing gel

Sterile gloves

1 packet of alcohol swabsticks (3 per packet), 1 packet of povidone-iodine swabsticks (3 per packet) or other skin disinfectant product (e.g., Chloraprep®, IV Prep®)

1 sterile barrier

2 sterile straight non-coring needles (or 90° angle non-coring needles with extension tubing if straight needles are not available)

2-4 10ml sterile syringe

1-2 vials of thrombolytic agent

30ml vial of 0.9% sodium chloride (USP) or pre-filled syringes

Pre-filled heparin syringe

Alcohol or povidone-iodine swabs or other disinfectant product

1 sterile non-coring needle of appropriate size with attached extension tubing

Sharps container

Swab Cap

OPTIONAL: Mask

PROCEDURE

1. Obtain order for thrombolytic agent. Explain procedure to patient.
2. Put on mask if appropriate.
3. Wash hands thoroughly with soap and water and dry with clean paper towel.
4. Remove current non-coring needle from the port.
5. Prepare the skin over the implanted port. (See policy on port access)
6. Open the sterile barrier. Arrange and prepare the supplies.

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7. Prepare the thrombolytic agent per manufacturer's instructions and draw up into an empty syringe in an amount equivalent to the volume of the catheter.
8. Attach a straight non-coring needle to an empty 10ml syringe.
9. Access the implanted port with the empty syringe/non-coring needle.
10. Access the implanted port with the thrombolytic agent, allowing fluid to rise in the other syringe.
11. Apply gentle pressure to the syringe filled with the thrombolytic agent, allowing fluid to rise in the other syringe.
12. Continue applying pressure on alternative syringes until the return contains blood or clot residue.
13. Withdraw 5ml of residue and blood.
14. Remove both needles from the implanted port.
15. Access the port with a primed non-coring needle/extension set.
16. Flush the port with 20ml of 0.9% sodium chloride, using a push-pause procedure, and following manufacturer's instructions for maintaining positive or neutral pressure in the catheter. The volume of the flush may be modified for infants or small children.
17. Flush the port with 5ml of heparin maintaining positive or neutral pressure in the catheter, or begin the infusion as instructed. Note: heparin will not be applicable to the Groshong port). Attach new Swab Cap when flushing completed.
18. Document the procedure in the patient's medical record.

RESPONSIBILITY

The Clinical Specialist has the responsibility for approval of, compliance with, and revisions to this policy.

MODIFICATION/REVISION

This policy is subject to modification or revision in part or its entirety to reflect changes in conditions subsequent to the effective date of this policy.

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REFERENCES

1. Infusion Nursing Standards of Practice – Revised 2016; Journal of Infusion Nursing, Supplement to January/February 2016, Volume 39, Number 1S.
2. Infusion Nursing: An Evidence-Based Approach, Third Edition edited by Mary Alexander, Ann Corrigan, Lisa Gorski, Judy Hankins, and Roxanne Perucca.
3. INS (Infusion Nurses Society) Policies and Procedures for Infusion Nursing, 3rd Edition.