

UNIVERSITY OF MICHIGAN HOSPITALS AND HEALTH CENTERS

Home Care Services

HomeMed • MedEQUIP • Michigan Visiting Care
Michigan Visiting Nurses • Wheelchair Seating Service

PROCEDURE

UMHHC-HCS: 253.036
First Approved Date: 9/2001
Current Approved Date: 1/23/13
Approval Signatures:
<i>Signatures on File</i>

TITLE: Vesicant Chemotherapy Administration and Blood Checks

DEFINITIONS:

Vesicant: an agent that has the potential to cause cellular damage or tissue destruction if infiltration occurs (Exhibit 1).

PROCEDURES:

A. Follow these procedures:

1. Obtain/review physicians order, identify patient using 2 identifiers and explain the procedure.
2. A central line is REQUIRED for all continuous infusions of vesicant cytotoxic agents. Use the distal lumen of the vascular access device (VAD), if using a multilumen catheter.
3. Prior to initiation of therapy, the location of the VAD tip must be verified (X-ray or angiography report) and the VAD checked for a blood return. If a blood return cannot be obtained, the physician will be notified for further orders.
4. UMHHC policy 07-01-010 Chemotherapy at UMHHC shall be followed for the initiation of therapy
5. A transparent dressing should be used so that the site and the movement of the catheter can be assessed.
6. Assess the insertion site of the VAD for signs of infection, swelling, leaking, patency and appropriate position.
7. Assess for venous obstruction, jugular vein distention, and superficial collateral circulation. If present, hold the cytotoxic medications and contact physician.
8. Patient and caregiver shall be instructed to monitor the infusion rate and check the insertion site of the VAD or port daily for signs of redness, pain, swelling, leakage or tenderness.
9. Check blood return once every 24 hours while at home.
 - a. Wash hands with soap and water. If unavailable, use waterless soap.
 - b. Follow standard precautions.
 - c. Clean the work surface and gather supplies.
 - d. Place absorbent pad under VAD connection and pump tubing.
 - e. Prepare syringe with 5 mL of normal saline.
 - f. Apply chemotherapy gloves and gown.
 - g. For PICC or tunneled VAD:
 - h. Place infusion device in STOP position.
 - i. Disconnect locking blunt cannula from VAD injection port, keeping tip sterile.

- j. Vigorously wipe VAD injection port with alcohol wipe for 15 seconds and insert prefilled normal saline syringe.
- k. Inject approximately 1 mL of normal saline.
- l. Pull back on syringe plunger until blood return seen (should be bright red and flow easily).
 - 1) If unable to obtain blood return attempt to reposition patient, or/and have patient perform valsava or raise arm.
- m. Flush remaining normal saline into catheter.
- n. Wipe catheter injection port with alcohol wipe.
- o. Insert locking blunt cannula into catheter injection port.
- p. Tape connections.
- q. Restart infusion device, recheck program and infusion pump delivery.
- r. For implanted port with Y injection as part of bent, non-coring needle:
- s. Vigorously wipe Y injection port of bent, non-coring needle tubing with alcohol wipe for 15 seconds and insert prefilled normal saline syringe.
- t. Clamp tubing above the "y" port.
- u. Inject approximately 1 mL of normal saline.
- v. Pull back on syringe plunger until blood return seen (should be bright red and flow easily).
 - 1) If unable to obtain blood return attempt to reposition patient, or/and have patient perform valsava or raise arm. Apply slight pressure on the bend of the bent, non-coring needle, insuring that the needle is touching the back plate of the port reservoir. If still unable to obtain a blood return, stop and clamp tubing, do not restart pump. Call physician.
- w. Flush remaining normal saline into catheter.
- x. Unclamp tubing, recheck infusion pump delivery.
- y. Dispose of syringe, blunt cannula, gloves and absorbent pad in chemo container.
- z. Document results in the nursing notes.

EXHIBITS:

- 1. Commonly Used Agents with Vesicant Properties

UMHHC/HCS REFERENCES:

- 1. UMHHC policy 07-01-010 Chemotherapy at UMHHC at <http://www.med.umich.edu/i/policies/umh/07-01-010.html>

APPROVAL AND REVISIONS:

- 1. September 2001, formalized, new procedure
- 2. September 200, reviewed, added venous irritants that are vesicants at higher concentrations.
- 3. September 2006, reviewed; flush solution increased to 5mL as per change in flushing volumes.
- 4. April 2010, reviewed; minor revisions.

5. January 2013, reviewed; changes made to flushing with implanted port due to change in product.

Exhibit 1

Commonly Used Agents with Vesicant Properties**

Dactinomycin (Actinomycin D)	Mechlorethamine (Nigrogen Mustard)
Daunomycin (Daunorubicin)	Mitomycin C (Mutamycin®)
Doxorubicin (Adriamycin®)	Vinblastine (Velban®)
Epirubicin (Pharmorubicin®)	Vincristine (Oncovin®)
Idarubicin (Idamycin®)	Vindesine (Eldisine)
	Vinorelbine (Navelbine®)

****This list is not all-inclusive**

Others:

Ciplatin (Platinol®). Vesicant if >20 mL of concentrated solution (>0.5 mg/mL), otherwise irritant only

Mitoxantrone (Novantrone®). Rare vesicant. Extravasation necrosis has been reported in higher concentrations.