

**CHEMOTHERAPEUTIC AND VESICANT AGENTS:
MANAGEMENT OF EXTRAVASATION**

Section: Nursing

Compliance: ACHC Infusion Pharmacy

ACHC Standards:

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Revised:

Approved by, Title and Date Approved: Kathleen Patrick, President 1/1/21, 5/1/21

I. POLICY

Drugs or agents with a significant potential to cause an extravasation injury, will be reviewed by the pharmacist on a case-by-case basis to determine whether the drug can be safely administered in the home setting. The pharmacist may consult with the physician prior to dispensing a vesicant agent. In the event of an extravasation, the nurse will follow emergency procedures and call 911 for emergency assistance, as applicable.

II. PROCEDURES

A. Prior to initiating care/services to a patient, all drugs or other agents will be assessed by the pharmacist, to determine whether it may create the potential for injury due to extravasation, such as known vesicants.

1. Extravasation is defined as the leakage of drug into tissues surrounding the injection site.
2. Drugs exhibiting the potential for producing extravasation injuries share one or more of the following properties:
 - a. hypertonicity
 - b. non-physiologic PH
 - c. Intrinsic or direct cytotoxic effects
3. Drugs producing vasoconstriction and tissue ischemia may also cause extravasation injuries
4. Agents which possess the potential for causing injury due to extravasation include, but are not limited to:
 - a. Antineoplastic:

- 1) Anthracycline antibiotics: Doxorubicin, Dactinomycin, Daunomycin
- 2) Vinca alkaloids: Vinblastine, Vincristine
- 3) Alkylating agents: Cisplatin, Mechlorethamine hydrochloride
- 4) Taxane: Paclitaxel

b. Sympathomimetic Amines: Dopamine

c. Intravenous Fluids and Electrolytes.

- 1) Calcium salts
- 2) Dextrose solutions >10%
- 3) Mannitol
- 4) Parenteral nutrition solutions
- 5) Potassium salts

d. Miscellaneous:

- 1) Diazepam
- 2) Nafcillin
- 3) Phenytoin
- 4) Ganciclovir
- 5) Amphotericin B
- 6) Vancomycin
- 7) Promethazine

NOTE: Vancomycin concentrations of up to 5mg/ml may be infused at a rate not exceeding 200ml/hr. via peripheral line or midline catheter but must be limited to no longer than 72 hours for a peripheral line and recommended not to exceed 7 days via midline catheter.

B. Signs of extravasation include:

1. Pain or burning while drug is being given
2. Blotchy redness around the needle site (may occur later on)
3. Severe swelling at site
4. Inability to obtain blood return (usually)
5. Ulceration usually occurs in 48-96 hrs.

C. Management of Extravasation:

1. Peripheral lines are not recommended when infusing chemotherapeutic and vesicant agents. Orders for peripheral route will be evaluated on a case-by-case basis, under special circumstances. (i.e.. Dopamine for hospice patient).
2. Central Line
 - a. Stop infusion.
 - b. Determine cause of extravasation.
 - Accidental dislodgment of needle from port septum
 - Thrombus formation
 - Catheter damage, displacement
 - c. Estimate amount of drug extravasated.
 - d. Notify the physician immediately for further instructions.

- e. Call 911 for emergency assistance and transport patient to nearest emergency room.
- f. Apply cold or warm compresses.
- g. Photograph suspected extravasation site whenever possible. Take photographs at follow-up visits.

D. Following an extravasation injury, the following information must be documented in the patient's clinical record:

- 1. Date and time of the event
- 2. Type of venous access (needle size and type)
- 3. Insertion site
- 4. Medication administered
- 5. Sequence of medications
- 6. Approximate amount of drug extravasated or suspected to have extravasated
- 7. Nursing interventions (if any) used
- 8. Subjective symptoms reported by the patient
- 9. Nursing assessment of the site
- 10. Physician notification
- 11. Follow-up measures taken, and patient instructions given

E. Follow Up Measures and Patient Instruction:

- 1. Observe site regularly for pain, erythema, swelling, induration and/or necrosis.
- 2. Administer pain medications as ordered.
- 3. Discuss need for plastic surgeon with the physician.
- 4. Instruct patient to report sensation changes such as pain, burning or stinging at site.

F. Complete an Incident Report. Notify supervisor.