GUAM MEMORIAL HOSPITAL AUTHORITY
ADMINISTRATION MANUAL

APPROVED BY:	RESPONSIBILITY:	EFFECTIVE DATE:	POLICY NO.	PAGE
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TITLE: POLICY AND GUIDELINES ON USE OF VASOPRESSIVE AGENTS AND OTHER VESICANTS				
LAST REVIEWED/REVISED: 10/2012				
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PURPOSE:

To establish guidelines for the infusion of vasopressive agents and other vesicants.

POLICY:

The infusion of vasopressive and vesicant agents requires a full assessment of the potential risks and benefits of their use in each particular patient, to include the known benefit and risks of central line placement. The urgency to resuscitate and maintain stability should be balanced with the critical need for a full assessment of all predictable risk to the patient and for a timely consideration/decision for insertion of a central venous access device.

The ordering Primary Physician is expected to have full knowledge of the indications and complications of vasopressive agents. Additionally, the recognition of potential harm from extravasation of these agents should address the infusion route and accessibility. The patient must be evaluated for high risk for infusion complications such as infiltration and extravasation. Prevention of infusion complications is the responsibility of the physician, nursing staff, and pharmacy staff. An assessment for central venous access placement shall be conducted when ordering vasopressive agents, vesicants, and irritants. It is highly recommended that patients with high risk for extravasation or with hemodynamic instability should have central line access.

Nursing assessment is additionally critical to infusion therapy with vesicants and irritants. The nurse is expected to participate in the assessment of the patient for suitable intravenous infusion access (Refer to Nursing Manual *Policy # 6301-II C-7, Intravenous Therapy*).

Clinical Pharmacists are also an integral part of the health care team. Medications with high risk for extravasation injuries should be assessed for appropriate routes of administration. Pharmacists are expected to participate in the administration of vasopressive agents, vesicants, and irritants by the review of medications. The pharmacist will make recommendations for proper administration to the physician and/or nurse as appropriate (Refer to Pharmacy *Manual Policy #703 High Risk/High Alert Medications* and Pharmacy Manual *Policy #816 Extravasation of Drugs and Antidotes*).

Communication among the health care team of multidisciplinary specialties is essential. Each discipline should be knowledgeable of institutional protocols and the most up-to-date treatment options. Each discipline should provide an independent and coordinated assessment of patient care management.

DEFINITIONS:

A. VESICANTS—certain medications that have the potential to cause skin necrosis, ulceration, gangrene, and complications that may lead to amputation.

B. IRRITANTS—medications that have the potential to irritate tissue if infiltration occurs.

C. SENTINEL EVENT—an unexpected occurrence involving death, permanent harm, serious physical or psychological injury or risk thereof including the loss of limb or function.

D. INFILTRATION—the inadvertent infusion of intravenous solutions or medications into the surrounding tissue instead of into the intended vascular pathway.

E. EXTRAVASATION—injury or damage to tissue caused by an inadvertent leakage of solutions from the vein to the surrounding tissue spaces during intravenous administration. With extravasation, damage can continue for months and may involve nerves, tendons, and joints. Delayed treatment may lead to surgical debridement, skin grafting, and amputation.

RESPONSIBILITIES:

1. Nursing Staff:
    a. Manage peripheral IV therapy as outlined in Nursing Policy # 6301-II C-7, Intravenous Therapy

2. Medical Staff:
    a. Maintain current knowledge of vasopressor, vesicant, and irritant use and contraindications
    b. Maintain current knowledge of the management of vasopressor, vesicants, and irritants; and the prevention of complications
    c. Timely recognition and anticipation of the need for a central venous access device
    d. Recognizing the risk of extravasation, infiltration, and other infusion-related complications
    e. Order for placement of central venous device when appropriate

3. Pharmacy Staff:
    a. Maintain current knowledge on the practice of administering vasopressors, vesicants, and irritants
    b. Advise on use of vasopressor, vesicants, and irritants as appropriate
    c. Issue prompt advice on any risk of infusion complication, management, and other guidance needed from the health care team.

SELECTION CRITERIA FOR CENTRAL VENOUS ACCESS PLACEMENT:

Careful adherence to proper procedures and the timely identification of the signs and symptoms of intravenous complications are crucial to avoiding potentially life-altering complications. Prevention of infiltration starts right at the time of venipuncture. When considering appropriate infusion sites and the risk of peripheral extravasation, the following criteria should be considered when ordering intravenous vasopressor and vesicants through a central venous access:

Indications:

1. Poor peripheral venous access and/or multiple attempts for intravenous access

2. Limited peripheral access due to hemodialysis access site, mastectomy, etc.

3. Medication(s) that suggest the need for or require central line access (i.e. vasopressor, hypertonic saline, high concentration/doses of potassium chloride, glucose, chemotherapy…)

4. Frequent blood draws or persistent requirement for intravenous access

5. Monitoring of central venous pressure

6. Long-term infusion of intravenous antibiotics, parenteral nutrition, and/or pain medications

7. Rapid infusion for intravenous fluids or blood products in emergent situations

Relative Contraindications:

1. Infection over the intended insertion site

2. Coagulation disorder

3. Anatomic obstructions; thrombosis

4. Superior vena cava syndrome

5. Distorted local anatomy (i.e. vascular injury, prior surgery, radiation history)

PROCEDURE:

1. Physician orders vasopressive agent or other vesicant.

2. Nurse identifies and communicates venipuncture sites for infusions with special emphasis on sites of infusions for vasopressors, vesicants, and irritants to managing physician.

3. Physician orders infusion of vasopressor, vesicant, and/or irritant via appropriate selected sites in communication with the nurse. Careful consideration for administration of vasopressor, vesicant, and/or irritant via central venous catheter access should be given and communicated among the health care team.

4. Physician and nurse shall discuss the need for central venous access with the patient and/or legal representative and obtain consent (except during emergent situations).

5. Pharmacist(s) acknowledges vasopressor, vesicant, and/or irritant order and routes of infusion. The pharmacist(s) shall participate in the infusion management of these agents.

6. Physician and nurse shall regularly assess intravenous administration routes with each physical assessment and document findings in the medical record.

MANAGEMENT OF EXTRAVASATION:

The management of extravasation is a multidisciplinary approach. The primary physician shall lead the treatment plan incorporating existing policies from the Nursing and Pharmacy Department. The nature of the treatment plan will be guided by the drug that has extravasated. See attachment I for the general treatment for extravasation of select drugs.

1. The primary physician shall lead the health care team in the treatment and management of extravasations and other intravenous infusion-related complications.

2. Nurses shall participate in the treatment and management of intravenous infusion-related complications as guided by *Policy #6301-II C-7 Intravenous Therapy* and *Policy #816 Extravasation of Drugs and Antidotes*. Assessments of the extravasation site will be documented on the post-extravasation flow sheet.

3. Pharmacists shall participate in the treatment and management of intravenous infusion-related complications as guided *by Policy #816 Extravasation of Drugs and Antidotes*. The pharmacists shall also participate in patient, family, and multidisciplinary education; and the monitoring the proper dosing, administration, and efficacy of treatment.

Physician, nurse, and/or pharmacist shall document and report any extravasations and other adverse drug reactions subsequent to intravenous therapy through the organization's occurrence reporting process (GMHA Form #0842) and on the medication error form (GMHA Form #0841) for tracking and review.

RELATED POLICIES

Policy # 816 Extravasation of Drugs and Antidotes: Pharmacy Department Policy Manual
Policy # 703 High Risk/High Alert Medication, Pharmacy Department Policy Manual
Policy # 6301-II C-28 Care and Management of Central Venous Access Devices, Nursing Services Manual
Policy # 6301-II C-7 Intravenous Therapy, Nursing Services Manual
Policy # 6201-270 Guidelines Preventing of Intravascular Device-Related, Infection Control Policy Manual

ATTACHMENTS

I. GENERAL TREATMENT FOR EXTRAVASTAION OF SELECTED DRUGS

ATTACHMENT I

MANAGEMENT OF EXTRAVASATION

EXTRAVASATED DRUG		LOCAL ANTIDOTE	ADMINISTRATION	COMPRESS
Hyperosmotic Solutions	Calcium chloride Dextrose 10% or more Parenteral Nutrition Potassium Radiocontrast media	Hyaluronidase (Vitrase, Amphadase, Hydase, Hylenex)	Reconstitute 150 units vial with 1ml of 0.9% NaCL. Administer SQ, 5 injections (0.2 mL each)	None
Nafcillin, Penicillin, Aminophylline		Hyaluronidase (Vitrase, Amphadase, Hydase, Hylenex)	Reconstitute 150 units vial with 1mL 0.9% NACL. Administer SQ, 5 injections (0.2 mL each)	Cold compress for extravasation of nafcillin
Sympathomimetics	Dobutamine Dopamine Epinephrine Norepinephrine Vasopressin Phenylephrine	Phentolamine	5mg in 10mL of 0.9% sodium chloride Inject 1ml of the antidote SQ liberally to the infiltrated area within 12 hours of extravasation. DO NOT exceed 0.1- 0.2mg/kg or 5mg total. If dose is effective, normal skin color should return to the blanched area within 1 hour	None
Amiodarone		Hyaluronidase (Vitrase, Amphadase, Hydase, Hylenex) Nitropaste 1"	Reconstitute 150 units vial with 1ml of 0.9% NaCL. Administer SQ, 5 injections (0.2 mL each) Q1H for the first 4 hours, then Q4H X 48H max Hold for SBP < 90	Cold compresses for 15 – 60minutes 3-4 times a day until symptom resolution

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GUAM MEMORIAL HOSPITAL AUTHORITY
REVIEW AND ENDORSEMENT CERTIFICATION

The signatories on this document acknowledge that they have reviewed and approved the following:

☐ Bylaws

☐ Rules & Regulations

(XX) Policies & Procedures

Submitted by Department/Committee: **Administration Manual**

Policy No.: _____

Title: **Policy and Guidelines on Use of Vasopressive Agents and and Other Vesicants**

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