

NATIONAL INSTITUTES OF HEALTH
WARREN GRANT MAGNUSON CLINICAL CENTER
NURSING and PATIENT CARE SERVICES

Standard of Practice: **Care of the Patient Receiving Dopamine in the Non-Critical Care Setting**

Essential Information

1. An IV infusion of dopamine on a general medical-surgical patient care unit is approved:
 - a. For an adult patient on a patient care unit (PCU) with cardiac monitoring.
 - b. At a rate not exceeding 2 mcg/kg/minute
2. A pediatric patient may receive an intravenous infusion of dopamine only in a critical care setting.
3. The medical order specifies whether a drug calculation is based on dry weight or daily weight.
4. Phentolamine is a possible treatment of extravasation and requires a medical order.

I. ASSESSMENT

- A. Prior to initiation, a nurse:
 1. Verifies blood return from the peripheral or central venous access device. If dopamine is infused via peripheral access device,
 - a. A large peripheral vein will be used.
 - b. The site will be assessed every hour for signs of extravasation or phlebitis.
 2. Assesses blood pressure, heart rate, oxygen saturation, and urine output. If a systolic blood pressure is less than 90 or heart rate is greater than 120, a nurse will report to the licensed independent practitioner (LIP) prior to initiating this vasoactive infusion.
- B. In accordance with the SOP: Medication Administration, two independent checks for the right patient, drug product labels, infusion pump settings, route of infusion, and applicable drug calculations are performed prior to administering a high-alert drug and with:
 1. A change in caregiver
 2. Each bag change
 3. A change in pump settings
- C. Prior to initiation, a nurse assesses heart rate, blood pressure, and peripheral perfusion which may include color, peripheral pulses, capillary refill, skin temperature, and presence of pain in the extremities.
- D. With the initiation of therapy and with any rate change, a nurse assesses heart rate and blood pressure every 15 minutes X2, every 2 hours X4, and then every 4 hours. If the patient develops hypotension or an irregular heart rate, a nurse notifies the LIP. Assessments of heart rate and blood pressure are increased to every 15 minutes until stabilized.
- E. Every 4 hours, a nurse additionally measures intake and output and peripheral perfusion as described above.
- F. Relevant laboratory data which may include serum electrolytes and BUN/creatinine is reviewed as ordered.
- G. Weight is measured daily.

II. INTERVENTIONS

- A. Dopamine is administered by a flow-controlled infusion pump and the infusion pump is labeled.
- B. A patient may not leave the PCU when dopamine is infusing unless monitored and accompanied by a licensed healthcare professional. When a patient leaves the PCU for a diagnostic test or procedure, a nurse notifies the receiving area that a vasoactive drug product is infusing. The PCU is called if any problems arise with the infusion.

- C. A nurse alerts the LIP if a patient develops an adverse drug effect which may include:
 - 1. Headache
 - 2. Nausea and vomiting
 - 3. Palpitations, angina, hypotension/hypertension, vasoconstriction, tachycardia, bradycardia, or irregular heart rate
 - 4. Dyspnea
- D. If an extravasation occurs:
 - 1. Stop administration of the drug.
 - 2. Disconnect the IV line at the point closest to the vascular access device
 - 3. Aspirate residual drug from the vascular access device
 - 4. Estimate the amount of drug extravasated
 - 5. Notify the LIP and clinical pharmacy specialist
 - 6. Remove peripheral access device (this does not include PICCs or midlines); remove needle from implanted port
 - 7. Using an indelible marker, mark any area of induration and swelling; size the area of extravasation by measuring a perpendicular length and width at the widest points
 - 8. Administer treatment of extravasation which may include phentolamine and/or the application of warm compresses.
 - 9. Elevate and rest the extremity and protect the site from undue pressure
 - 10. May consider obtaining a photograph of site (contact Patient Photography, 6-9994).
 - 11. Reassess site every 8 hours X 48 hours for pain, erythema, induration, mobility, skin changes, and necrosis
- E. Patient/family education is provided in accordance with SOP: Medication Administration. Additionally, a nurse instructs the patient to notify a nurse for any discomfort at the infusion site.

III. DOCUMENTATION

- A. Vital signs are documented in an approved electronic medical record or other approved medical record form.
- B. The infusion rate is documented in the electronic documentation system with every bag change and change in caregiver.
- C. Assessment parameters, interventions, patient's response to therapy are documented at least every 4 hours.
- D. Patient/family education is documented when instruction is given.

IV. REFERENCES:

- A. McEvoy, G. (ed.) (1995). American Hospital Formulary Service: AHFS Drug Information, Bethesda, MD, American Society of Hospital Pharmacists.
- B. Abrams, A.A. (1995) Clinical Drug Therapy, 4 ed. J.B. Lippincott Company, pp. 581-587.
- C. Micromedex <http://druginfo.cc.nih.gov>

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