Peripheral Vasopressors

NURSING INTERVENTIONS (initial when completed/assessed; *significant findings and document on A/I Flowsheet)																							
TIME	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	01	02	03	04	05	06
Peripherally Infusing Vasoactive Medications: _____ Date Started: _____ Time started: _____																								
Site: _____ Gauge: _____ Medication: _____ Ultrasound Confirmed: ☐ Yes ☐ No																								
✓ Blood Return																								
Phlebitis Scale																								
Infiltration Scale																								
Consultant/Senior																								

LHSC Parenteral Drug Administration policy allows for the ***temporarily*** administration of a CVC during an emergency until a CVC can be established.

There is evidence to support that shock resolution is reduced when hypotension is corrected more quickly), and the temporary administration of a vasopressor through a peripheral catheter may resolve hypotension faster.

The administration of peripheral vasopressors carries risk for serious tissue injury. Close site monitoring is essential as early detection and intervention is the best way to mitigate injury.

Indications for Central Venous Catheter (CVC)

A CVC is required for the administration of vasopressors or vesicants that do not meet criteria for peripheral vasopressor protocol. During acute resuscitation, placement can be deferred for up to 2 hours to facilitate insertion safety and prompt reversal of shock. If appropriate vascular access can not be established within 5 minutes, intraosseous insertion should be considered.

A Central Venous Line is required in the following situations:

1. More than one vasopressor is required
2. Maximum dose of single agent norepinephrine or dopamine has been reached, dosing requirements increasing/patient is unstable or required longer than 24 hours
3. Unable to establish or maintain two peripheral IVs that comply with peripheral vasopressor protocol
4. Additional access sites are needed for fluid or medications
5. Concern over IV site quality exists
6. Recommended for medications that are hypertonic, high or low pH or concentrated electrolyte solutions
7. PICC lines are not suitable replacements for central venous lines in patients requiring multiple agents, ongoing resuscitation, vasopressors use or frequent blood sampling

Arterial Lines

1. Required when continuous IV infusions of vasoactive drugs are used
2. An exception to the arterial line policy **can be considered** for patients who meet peripheral vasopressor protocol; arterial lines are preferred for accurate and frequent BP measurements
3. Order must be entered with the name of the approving Consultant entered into Power Chart **using the Crit Care Peripheral Vasopressor power plan.** The order will task to the nurse for renewal every 12 hours. AI documentation confirming this review is required every shift.

Protocol for Peripheral Vasopressors

Acceptable Indications:

- Vasopressor use expected to be short
- Single agent norepinephrine (maximum 12 mcg) or dopamine (maximum 10 mcg/kg/min) for a maximum 24 hours
- **Must be ordered via Crit Care Peripheral Vasopressor order set and approved by CCTC Consultant (days) or Senior (nights)**. The order will task to the nurse to review every 12 hours. AI documentation confirming the review is required.
- Notify Charge Nurse if a vasopressor is infusing peripherally

Site Requirements:

- Forearm or upper arm only (no lower extremity /hand/anticubital fossa)
- Minimum 20 gauge with blood return; assess before starting and Q shift
- Must have second back up line that meets same criteria
- No other medication can be administered in same line

Monitoring Requirements:

- Assess and document Infiltration and Phlebitis Scales Q1H and PRN
- Initiate Extravasation Protocol/notify MD **immediately for all site concerns**
- Complete AEMS for **ALL** site or insertion complications for PERIPHERAL or CENTRAL VENOUS LINE adverse events

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Hourly assessment of the site must be documented using the phlebitis/infiltration scale when vasopressors are running peripherally.

If a patient has peripheral vasopressors running temporarily, use this section to document your assessment (there is a duplication of the line for recording the medication).

Ultrasound Confirmed only applies if ultrasound was used to insert the catheter peripheral catheter. This would be appropriate in a long upper extremity peripheral IV.

Vein Assessment

VEIN LEVEL

Level 1: Visible, easy to palpate, large in size

Level 2: Visible, easy to palpate, moderate in size, previous IV site

Level 3: Visible, easy to palpate, small size, previous IV site, limited veins (some sclerosed)

Level 4: Difficult to see, can be palpated, age > 70, previous therapy has resulted in poor veins

Level 5: Vein not visible, cannot be palpated, may require multiple techniques

PHLEBITIS SCALE

1+ Pain at Site

2+ Pain and redness at Site

3+ Pain, redness and swelling at site with palpable cord of less than 7.5 cm

4+ Pain, redness and swelling at site with palpable cord of 7.5 cm or greater

Infiltration Scale *DAR if >0

0 No symptoms

1 Skin blanched

Edema < 2.5 cm in any direction

Cool to touch

With or without pain

2 Skin blanched

Edema 2.5 – 15 cm in any direction

Cool to touch

With or without pain

3 Skin blanched, translucent

Gross Edema > 15 cm in any direction

Cool to touch

Mild – moderate pain

Possible numbness

4 Skin blanched, translucent

Skin tight, leaking

Skin discolored, bruised, swollen, gross edema > 15 cm in any direction

Deep pitting tissue edema

Circulatory impariment

Moderate – severe pain

Infiltration of any amount of blood product, irritant, vesicant

Lewis et al. 2017. Journal of ICM. Adapted from Society of Infusion Nursing

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Assess the site Q1H and PRN using the Phlebitis and Infiltration Scale. A score greater than "0" on either scale, requires immediate physician notification for assessment.

The Consultant must be notified every shift of the continued use of peripheral vasopressor infusions or of any adverse findings.

Review the protocol for the peripheral administration of vasopressors/deferral of arterial line to ensure protocol is being followed.

Document plan for IV management Q shift.

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Complete an AEMS and notify CN for any adverse event related to peripheral vasopressor administration OR central venous catheter insertion, removal or maintenance. This will help us to track the frequency and identify harm reduction strategies.