

PROTOCOL FOR: Propofol: Care of the Patient Receiving Continuous Propofol Infusion

- POLICY:**
1. Propofol is to be administered as an infusion only in critical care areas when patient is on a cardiac monitor, and is mechanically ventilated.
 2. The continuous infusion must be administered on an infusion pump, using drug guardrails, and the order must relate a therapeutic goal- i.e. **RASS score** (used in ICU), sedation level, or explanation of the desired level of sedation. (A usual desired RASS is 0 to -1.)
 3. Obtain access for frequent BP monitoring. Continuous blood pressure monitoring via an arterial-line is preferable, otherwise, non-invasive blood pressure monitoring may be used.
 4. Chlorhexidine will be used as the prep for any access to the bottle, IV tubing, or access port in which the med is to be infused, and strict aseptic technique will be observed.

INDICATION: Sedation for a patient receiving mechanical ventilation in a critical care setting.

DESIRED PATIENT

- OUTCOMES:**
1. Patient will maintain a constant level of sedation while on mechanical ventilation, until hemodynamic and respiratory stability is achieved and the weaning process can begin.
 2. Patient will not experience negative side effects from Propofol administration.

**CLINICAL
ASSESSMENT AND**

CARE: A. Prior to starting infusion:

1. Assess patient's mentation, response to ventilation therapy (i.e., compliance, O₂ saturation, peak pressures), vital signs and hemodynamic status.
2. Communicate desired outcome with patient/family.
3. Premixed infusion to be provided by Pharmacy.
Available concentrations:
 500 mg/50 ml D₅W = 10 mg/ml
 1,000 mg/100 ml D₅W = 10 mg/ml
4. Refrigeration of the medication is not recommended.
5. Visually inspect bottle for particulate matter and discoloration prior to administration.
6. Wipe the stopper of the vial with a Chlorhexidine swab or wipe and use strict aseptic technique when spiking, priming and attaching pump tubing.

B. Initiating the infusion:

1. Begin the infusion at **10 mcg/kg/min**, unless otherwise indicated per MD/LIP order.

PROTOCOL FOR: Propofol: Care of the Patient Receiving Continuous Propofol Infusion

2. Titrate infusion by **10 mcg/kg/min** every **5-10 minutes** until the desired level of sedation is achieved (to a **maximum dose of 50 mcg/kg/min**).
 3. Most patients will be maintained at an infusion rate of **10 to 50 mcg/kg/min**. Notify physician/LIP if specified level of sedation is not achieved at this maximum dose - higher doses may only be given after consultation with and upon specific order of the MD/LIP.
- C. **Bolus dosing:** Bolus dosing is not recommended as profound hypotension can occur with bolus administration. A bolus dose should only be used in an emergency to rapidly increase depth of sedation (i.e. to gain ventilatory control) in patients who are hemodynamically stable and in whom hypotension is not likely to occur. Patients with compromised myocardial function, intravascular volume depletion or abnormally low vascular tone (i.e., sepsis), may be more susceptible to hypotension. If an IV bolus has been ordered, it may be administered by the RN in the presence of the MD/LIP. The bolus, generally **10 - 20 mg**, should be administered direct IV push (undiluted) **over 3-5 minutes**.
- D. **During the infusion:**
1. Monitor VS every 1-2 hours per unit routine and more frequently during active titration (based on patient's hemodynamic response).
 2. Daily evaluation of level of sedation and assessment of CNS function is necessary to determine the minimum dose of Propofol required to achieve the desired level of sedation.
 3. In ICU, unless specifically ordered to hold mechanical ventilator protocol, patients will be screened for potential ventilator weaning. In order to screen, propofol must be titrated to achieve a Richmond Agitation Sedation Scale score of 0 (alert/calm).
 4. Patients should receive concomitant narcotic analgesia when indicated, as Propofol does not have analgesic properties.
 5. The tubing should be changed every 12 hours, using strict aseptic technique and any unused portion of the drip should be discontinued 12 hours after the bottle has been spiked. (Tubing / bottle change should be coordinated.)
 6. Since propofol is emulsified in 10% intralipid, the caloric content should be evaluated as part of the patient's nutritional intake.
 7. Patients at risk for hyperlipidemia should be monitored for elevation in serum triglycerides and Propofol should be discontinued if unacceptably high triglyceride levels develop.
- E. **Decreasing or discontinuing the infusion:**
1. To wean the infusion, follow specific orders.
 2. If extubation is planned, discontinue the infusion 10-15 minutes prior to extubation.

PROTOCOL FOR: Propofol: Care of the Patient Receiving Continuous Propofol Infusion

3. Unless severe reaction or hypotension should occur, avoid abrupt discontinuation of the med, as this may cause anxiety, confusion, agitation and resistance to mechanical ventilation.
- F. **Adverse reactions:** Notify MD/LIP if the patient cardiovascular depression (bradycardia, hypotension), nausea, or other adverse reaction, or pain at injection site.
1. If mild hypotension develops during titration, decrease the infusion rate and elevate the patient's lower extremities (raise knee gatch).
 2. If clinically significant hypotension or cardiovascular depression occurs, administer IV fluids or vasopressor therapy per orders and discontinue the Propofol infusion.

PATIENT/FAMILY

- TEACHING:**
1. Reinforce rationale for Propofol therapy.
 2. Reinforce to patient/family that the sedative state is produced from the medication and is the desired effect.

RELATED ICU

PROTOCOL: Mechanical Ventilator Discontinuation Protocol

APPROVAL: Intensive Care Unit Standards Committee
Nursing Standards Committee
Pharmacy Department

EFFECTIVE DATE: 10/95

REVISION DATES: 3/96, 5/00, 10/03, 1/06, 3/08, 5/09, 9/09

REVIEWED DATES: 9/08