VANDERBILT UNIVERSITY

MEDICAL CENTER

Surgical Intensive Care Unit
Continuous Paralytic Infusions Practice Management Guideline

I. **Purpose**

To standardize the process for initiating, managing, and discontinuing a paralytic infusion in the surgical intensive care unit (SICU)

II. Procedures

a. Provider Preparation
   i. Ensure patient is receiving adequate sedation using "ICU Sedation" order set.
      1. Propofol or midazolam should be ordered and titrated to a goal RASS of -5
      2. If patient is requiring propofol of 50 mcg/kg/min or greater and not meeting the goal RASS of -5, consider ordering midazolam 2mg IV bolus and/or midazolam 1-2mg/hr continuous infusion.
   ii. Ensure patient is receiving adequate analgesia using "ICU Sedation" order set.
      1. Fentanyl 25-400 mcg/hr continuous infusion titrated to a goal CPOT 0
   iii. Place order for weight-based paralytic infusion titratable and initial bolus dose through the SICU admission order set with train of four (TOF) goal 2/4 twitches.
      1. Cisatracurium (Nimbex) 0-10 mcg/kg/min continuous infusion titrated by 0.5 mcg/kg/min every 10 minutes to goal TOF
      2. Vecuronium (Norcuron) 0-1.7 mcg/kg/min continuous infusion titrated by 0.5 mcg/kg/min every 10 minutes to goal TOF
   iv. Place orders for RASS goal -5, CPOT goal 0, and BiS goal 40-60.
   v. Place order for lubricating eye drops at least every 4 hours while paralyzed to prevent corneal injuries.
   vi. Ensure orders for periodic repositioning of patient ("turning") are in place

III. Initiation of paralytic infusion

a. RN will ensure RASS -5, CPOT 0, and BIS 40-60 before initiation of the paralytic infusion.
b. If patient is unable to meet MAP goal during sedation in order to achieve RASS -5; CPOT 0 and BIS 40-60, RN will notify SICU provider team.
c. RN will remain at bedside for 15 minutes after initiation of the paralytic infusion to monitor for adverse reactions such as hypersensitivity which could be evidenced by tachycardia, hypotension, flushing, rash or angioedema.
d. RN will titrate the paralytic infusion based on titration instructions listed in the medication order.

IV. Discontinuation of paralytic infusion

a. The paralytic infusion should be paused every 24 hours, unless contraindicated, to allow for a neurologic assessment.
b. The SICU team should discontinue the paralytic infusion as soon as the patient's condition no longer warrants paralysis.

c. Once the infusion has been discontinued, continue to monitor TOF every hour until 4/4 twitches have returned. Once patient has 4/4 twitches, the bedside nurse will notify the SICU team. The SICU team will adjust RASS/CPOT goals as appropriate.

References

1. Greenberg SB, Vender J. The use of neuromuscular blocking agents in the ICU: where are we now? Crit Care Med. 2013 May;41(5):1332-44.
2. Murray MJ, Cowen J, DeBlock H, et al. Clinical practice guidelines for sustained neuromuscular blockade in the adult critically ill patient. Crit Care Med. 2002 Jan;30(1):142-56.
3. Murray MJ, DeBlock H, Erstad B, et al. Clinical practice guidelines for sustained neuromuscular blockade in the adult critically ill patient. Crit Care Med. 2016 Nov;44(11):2079-2103.

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