VANDERBILT UNIVERSITY
MEDICAL CENTER

Surgical Intensive Care Unit
Continuous Paralytic Infusions Practice Management Guideline for Providers

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/analgesic using "ICU Sedation" order set.
         1. Propofol or midazolam should be ordered and infusing.
         2. If the patient is requiring propofol infusion ≥ 50 mcg/kg/min and not meeting RASS -5 goal, consider ordering midazolam IV bolus (i.e. 2mg q2h) and/or midazolam infusion at similar rate.
      ii. Place order for paralytic infusion titratable and initial bolus dose, as found on SICU admission order set; set order for TOF goal 2/4.
         1. Cisatracurium (Nimbex): dose: 0-10 mcg/kg/min; titrate by: 0.5 mcg/kg/min q10 minutes until goal TOF is reached
         2. Vecuronium (Norcuron): dose: 0-1.7 mc/kg/min; titrate by 0.5 mcg/kg/min q10 minutes until goal TOF is reached
      iii. Place orders for RASS goal -5, CPOT goal 0, and BiS goal 40-60.
      iv. Place order for lubricating eye drops at least every 4 hours while paralyzed to prevent corneal injuries.
      v. Ensure orders for periodic repositioning of patient ("turning") are in place

III. Initiation of paralytic infusion
      i. RN will ensure RASS -5, CPOT 0, and BIS 40-60 before initiation of the paralytic infusion.
      ii. If patient is unable to meet MAP goal with sedation in order to achieve RASS -5; CPOT 0 and BIS 40-60, RN will notify SICU provider team.
      iii. 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.

iv. RN will titrate the paralytic infusion based on titration instructions listed in the medication order.

IV. Discontinuation of paralytic infusion

i. Patients receiving a NMBA will have the dosage decreased to allow a neurologic assessment every 24 hours, unless contraindicated

ii. Infusion should be discontinued as soon as the patient's condition no longer warrants paralysis, to be determined by ICU team.

iii. Once infusion has been discontinued, continue to monitor TOF q1 until 4/4 twitches have returned. Once patient has 4/4 twitches, notify SICU team who will consider adjusting RASS/CPOT goals.

References:

Adapted from "Management of Continuous Infusion of Neuromuscular Blocking Agent in the MICU and COVID-ICU" SOP.

Bittner, E. A. (2021). Neuromuscular blocking agents in critically ill patients: Use, agent selection, administration, and adverse effects (P. E. Parsons, G. Finlay, & M. Crowley, Eds.). *UpToDate*. Retrieved April 20, 2022, from https://www.uptodate.com/contents/neuromuscular-blocking-agents-in-critically-ill-patients-use-agent-selection-administration-and-adverse-effects?search=neuromuscular%20blockers%20infusions%26source=search_result&selectedTitle=1~150&usage_type=default&display_rank=1

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