

RNs/RTs: Caring for Medically Paralyzed Patients

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Spectrum Health contact: Nancy Bekken

Neuromuscular Blocking (NMB) medications may be used in patients with severe acute respiratory failure.

Common NMB's used for medical paralysis: Vecuronium (Norcuron), Cisatracurium (Nimbex), Rocuronium (Zemuron) or Atracurium (Tracrium)

Effects:

Paralyze all skeletal muscles preventing skeletal muscle contraction. Smooth muscles and cardiac muscles are not affected by NMB's.

Purpose:

Prevent patient from initiating ventilations for the purpose of:

1. Preventing the dyssynchrony of patient breaths with ventilator breaths (coughing, trying to exhale when vent delivering a breath).
2. Improving ventilation: no muscle resistance to the ventilator.
3. Improving oxygenation: by reducing the work of breathing and because the patient is unable to move any skeletal muscles, there is less oxygen demand by the muscles and more oxygen available for other essential tissues.

Considerations:

- Patients are unable to breathe if the ventilator becomes disconnected. RN's and RT's must listen for ventilator alarms and respond immediately.
- Patients **MUST** have adequate sedation and analgesia when receiving NMB's, they are unable to indicate if they are experiencing pain or anxiety, assume they are and proactively manage patient discomfort.
- Patients are unable to respond to any stimulation, they are unable to open eyes, to respond to questions, to swallow or to move.
- The only neuro assessment that can be done while medically paralyzed is pupil response to light. This is usually assessed every 2 hours. If a full neuro assessment is required, the NMB will have to be stopped.
- Patients are unable to blink and are at risk for corneal abrasions, eye lubricant should be ordered. Eyes may need to be taped shut to fully cover the sclera.
- Patients are at high risk for pressure injury, reposition every 2 hours and assess skin closely.
- Support joints when repositioning patients to prevent dislocation
- Assign a staff member to observe the ETT and ventilator tubing to prevent dislodgement or disconnection.
- Use heel boots to prevent foot drop and pressure injury.
- Patients should be suctioned every 2-4 hours, but they will be unable to cough and secretions are often minimal.
- Patients should have thromboprophylaxis as they are at high risk for VTE.
- Head of bed should be elevated to 30° unless contraindicated for specific patient.
- Assure orders for bowel medications are present. The goal is to have at least one bowel movement every 3 days.
- Tube feeding will generally be started / continued, post pyloric feeding is preferred.

Monitoring

Peripheral Nerve Stimulation (PNS) with Train of Four (TOF) assesses the level of paralysis to assure that the patient has not received excessive doses causing prolonged paralysis. See Peripheral Nerve Stimulation Procedure for steps for assessment. Goal is generally 1-2 twitches with 4 stimulations. It is ok if the patient isn't fully paralyzed, the goal is improved oxygenation and ventilation, not absence of movement. Bispectral Index (BIS) assesses the level of patient awareness to assure adequate sedation/analgesia. Patients should not be awake or aware while medically paralyzed. BIS monitoring may not be available at all sites or all units.