VANDERBILT HEALTH
DIVISION OF ACUTE CARE SURGERY

Isoflurane Sedation for VUMC Trauma ICU SOP

Inhaled isoflurane is an adjunctive continuous sedation medication that is increasingly being utilized to provide sedation for mechanically ventilated patients in intensive care units and for patients who are failing other sedation/analgesic combinations. The FDA has granted an expanded access protocol (EAP) for isoflurane. Isoflurane sedation provides effective sedation over the spectrum of light to deep target sedation level with ease of titration, and the specific benefit of faster awakening times. This is of benefit for *patients requiring frequent sedation pauses for neurologic checks and/or other evaluations such as patients with severe TBI, open abdomen or open chest cavity, spinal cord injuries*. Isoflurane sedation will be used in VUMC Trauma ICU for those target populations who meet the following:

Inclusion criteria

1. Patients receiving invasive mechanical ventilation and continuous sedation in the ICU with...
2. Inability to maintain a target sedation level with conventional intravenous sedatives such as:
    a. recurring episodes of agitation or self-harm, such as attempting or actual removal of an endotracheal tube or of indwelling catheters or monitors, or necessitating physical restraints; or
    b. escalating sedative and opioid drug doses, despite mitigating strategies (e.g., sedative drug combinations or rotation to reduce toxicity); or
    c. clinical concerns for, or indications of, serious untoward effects of ongoing conventional intravenous sedation and analgesia agents (e.g., hypertriglyceridemia, propofol-related infusion syndrome, bradycardia, iatrogenic withdrawal syndrome)

Exclusion Criteria

1. Adolescent Patients <18 years of age
2. No identified surrogate decision maker available for informed consent
3. Traumatic brain injury WITH elevated intracranial pressures via IPCm or EVD or concern for elevated ICPs being treated with hyperosmolar therapies
4. Personal or Family History of malignant hyperthermia
5. Pregnant patients
6. History of Ventricular Tachycardia or Long QT syndrome

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