

USE OF PENTOBARBITAL FOR TOTAL SEDATION AND VENTILATOR WITHDRAWAL

GUIDELINES FOR PHYSICIAN STAFF FROEDTERT HOSPITAL, MILWAUKEE, WISCONSIN

Developed by the: Palliative Care Committee

This guideline will outline the use of pentobarbital (Nembutol™) as a sedative agent for use in ventilator withdrawal of the dying patient or for so called, “terminal sedation.”

1. Definitions

a. terminal (dying) patient

a patient who's disease has progressed beyond the point at which care aimed at cure, remission or rehabilitation is feasible.

b. total sedation

a medical procedure to alter a patient's level of consciousness, with the intent to relieve suffering, for a dying patient, until the time of death.

c. refractory symptom

a symptom that cannot be controlled, despite aggressive efforts that do not compromise consciousness.

2. Clinical situations in the care of dying patients, where use of pentobarbital is appropriate.

- Sedation for refractory symptoms--dyspnea, pain, delirium, when all other modalities for symptom control have proven ineffective. The goal of this sedation is to relieve intolerable symptoms until the time of death. This treatment is not equivalent to assisted suicide or euthanasia.
- Sedation for the awake patient, who has requested withdrawal of mechanical ventilation, with the expectation that such removal will result in death. (example: metastatic lung cancer who cannot be weaned from ventilator support).

3. Ethical basis for terminal sedation

- patient right to relief of pain and suffering
- professional duty to relieve suffering
- right to choose therapeutic options--patient autonomy, informed consent
- principle of double effect: compelling primary intent (relieve suffering) and unavoidable untoward consequences (potential for accelerating death)

4. Procedure—pre-sedation

a. Patient selection.

- Dying patient with intolerable symptoms or awake ventilator dependent patient requesting withdrawal;
- Palliative Care Service attending physician consultation and/or ICU/Pulmonary attending physician consultation in cases in ventilator withdrawal;
- Review of medical records, patient interview and examination, to determine suitability for terminal sedation;

- b. Family meeting (with patient if patient is decisional)
 - Discussion of prognosis, treatment options and goals of total sedation;
 - Review of decision-making authority/advance directive information;
 - Completion of Advance Directive if not already done (decisional patient)
- c. Meeting with hospital staff: primary physician team, nurses, social worker and chaplain.
- d. Write DNR order if not already completed
- e. Review current treatment plan, medications, etc.—discontinue treatments not contributing to comfort; (note: discontinuing artificial hydration/nutrition is recommended but not required).
- f. Establish time for beginning sedation; coordinate family, chaplain visits in relation to timing of sedation.
- g. Document plan in medical record: reason for decision to use sedation, who is the legal agent making the decision (patient or surrogate); who participated in discussion; alternatives and expected prognosis.

5. Procedure—Sedation

- a. Order pentobarbital to be present on floor in time for beginning sedation:
 - Pentobarbital 50-100 mg for IV push administration at 50 mg/min by physician; followed by:
 - Pentobarbital 1-2 mg/kg/hr IV for continuous infusion to begin after bolus dose.
- b. Discontinue heart monitors, pulse oximetry
- c. Begin Pentobarbital administration;
- d. Remove mechanical ventilation once desired level of sedation is achieved (see below)
- e. Hourly assessment of sedation x 4, then q 2 to ensure desired effect consistent with goals of care.
- f. Documentation in medical record of dose of pentobarbital, titration guidelines, monitoring guidelines.

6. Dose Titration Guidelines

The goal of terminal sedation is provide first stage anesthesia; the eye lash reflex is used to assess level of sedation. First stage anesthesia is achieved when a soft-tactile stroke over a close eye lid causes a small flicker/reflex; deeper anesthesia will cause loss of this reflex.

- Clues to the need for an increased dose of medication are: arousal to verbal or tactile stimulation; frequent body movement, signs of agitation;
- Clues to the need to decrease dose of medication are: loss of eye lid reflex, apnea, snoring, vomiting, fixed/pinpoint pupils.

When dose escalating, the drip rate of a continuous infusion can be increased in intervals of 0.5-1.0 mg/kg/hr, every hour. If significant arousal or agitation develops, re-bolusing with 50-100 IV push may be necessary.

REFERENCES

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