IV Administration of Ketamine

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Within the Scope of Practice/Role of ____APRN  X__RN  ____LPN  ____CNA

ADVISORY OPINION
IV ADMINISTRATION OF KETAMINE FOR INTRACTABLE PAIN FOR ADULTS

A number of inquiries have recently been received by the Board for Nursing questioning the intravenous administration, by Registered Professional Nurses (RNs), of drugs classified as anesthetic agents (most specifically ketamine), to patients experiencing pain. The Board’s advisory opinions indicated that it is not within the scope of practice for RNs to use these medications for conscious sedation. However, meeting certain conditions, an RN could administer such drugs to patients in an intensive care unit or emergency room department. Recent inquiries have requested that a re-examination of this position consider the use of low-dose ketamine infusion for pain control.

As background information, ketamine is identified by the Federal Drug Administration as an intravenous anesthetic agent. It has been used for this purpose since the 1960s. However, because of its psychomimetic reactions which include: feeling light-headed, floating, having "out of body" experiences, visual hallucinations, "tripping", delusions, and delirium, ketamine’s use as an anesthetic agent has had limitations. In contrast, these central nervous effects have made ketamine attractive as a drug of abuse.

Within the last ten years, although not licensed for this purpose, low-dose ketamine has found utility as an aid in providing analgesia for the treatment of post-operative pain, neuropathic pain, and chronic pain especially related to patients with opioid tolerance. Clinical studies suggest that in the majority of patients, the use of low-dose ketamine is a useful adjunct to standard practice opioid analgesia resulting in: a decrease in opioid requirements in both surgical and non-surgical patients, fewer physician interventions to manage severe pain, a positive impact on knee mobilization after total knee arthroplasty, a decrease in post-operative nausea and vomiting, and reduced pain scores for as long as one-year after surgery. The literature also cautions that prescribers must be vigilant, and that further study is warranted to determine optimal dosages of low-dose ketamine administration.

Because ketamine is licensed as an anesthetic agent that must be administered by anesthesia providers, because of the "complexity of patient assessment, treatment decision-making and initial monitoring," because of a legitimate concern for the potential for abuse, and because of the possibility of distressing side effects, the Board is cautious in considering the administration of low-dose ketamine infusion by RNs in general patient care areas. Thus, the Board continues to affirm its position but, based on current research evidence, adds the following modification:

Within the first twenty-four (24) hours of initiation of low-dose ketamine administration, RNs, with demonstrated competence, can administer and monitor patients on this regimen only to patients in recovery rooms, critical care, hospice, step-down or palliative care areas, that is, in patient care units with low patient to nurse
ratios. Following this time period, and with no evidence of untoward side effects, such patients can be cared for by RNs, with demonstrated competence, on general patient units.

I. RATIONALE
The intent of administering low-dose ketamine is to provide analgesia for the treatment of pain. This procedure is performed by RNs with additional education, skills, and demonstrated competency. This advisory opinion CAN NOT be construed as approval for the RN (non-CRNA) to administer an anesthetic agent for the purposes of anesthesia.

II. GENERAL REQUIREMENTS
A. Candidates for low-dose ketamine administration must be 18 years of age or older.
B. Candidates for low-dose ketamine administration must be evaluated by Anesthesiology or Licensed Independent Provider and assessed for appropriateness before initiation of therapy.
C. A patient-specific order for a low-dose ketamine infusion must be provided by and is restricted to Anesthesiology or a Licensed Independent Provider.
D. Low-dose ketamine infusions must be prepared only by the pharmacy.
E. Low-dose ketamine should be infused through its own dedicated IV line (when possible) or via the most proximal port of a carrier solution.
F. Low-dose ketamine should be infused through portless IV tubing to avoid inadvertent bolusing.
G. Low-dose ketamine should NOT be bolused as a treatment for pain except by an anesthesia provider.
H. Low-dose ketamine should be infused using an IV infusion control device with a locked control panel.
I. Vital signs should be monitored as well as alertness, orientation, evidence of nystagmus, bad dreams and unpleasant hallucinations.
J. The prescriber should be notified of a heart rate greater than 100 beats per minute, a systolic B/P less that 90 mmHg, a respiratory rate less than 10 breaths per minute, oxygen saturation of less than 93% and symptoms of emergence reactions such as bad dreams, hallucinations and nystagmus.
K. The facility must provide a written policy and procedure that documents the role of the RN in the administration of low-dose ketamine, frequency of assessment and availability of qualified prescriber.
L. Policies, procedures, and protocols (order sets) have been approved by the facility prior to implementation.
M. Policy and procedure will specify the required emergency equipment and medications which must be immediately available to the patient receiving low-dose ketamine. This includes all emergency equipment and medication required to regain and/or maintain the patient’s cardiac and respiratory state.
N. Only RNs who have documented initial and ongoing clinical competency on file with the employer may administer low-dose ketamine.
O. Current certification in Advanced Cardiac Life Support (ACLS) on file with the employer.
P. Continuous pulse oximetry will be monitored on all patients during low-dose ketamine administration.
Q. The RN responsible for administering low-dose ketamine may not leave the patient unattended or engage in other tasks that could compromise continuous monitoring of patient, airway and/or level of consciousness.
R. The RN has the right and responsibility to refuse to administer any medication that may induce procedural sedation when in the professional judgment of the RN, the medication or combination of medications, the dosages prescribed, or frequency of administration may produce a state of moderate or deep sedation or place the patient at risk for complications.

III. REFERENCES