10 Tips for Fast Tracking Outpatients

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Patients feel no pain, yet they respond to the surgeon's commands. And afterwards, they don't remember a thing. Welcome to the world of conscious sedation. Here are 10 pearls to fine-tune your regimen.

1. Eliminate benzodiazepines. Oral benzodiazepines were the mainstay of dental conscious sedation. IV Valium (diazepam) was replaced with IV Versed (midazolam) as part of the conscious sedation routine. The gastroenterologists, one of the highest volume providers of sedation, have relied upon traditional benzodiazepines with opioids for conscious sedation for endoscopic examinations. The GI docs now recognize that propofol, not benzodiazepine-opioid, is the most efficacious agent to speed patients through the system.

In 1997, Oxorn, et. al, found that patients who received a 2mg midazolam premedication were three times more likely to request pain medication in the PACU. However, the midazolam-premedicated patient showed no propofol-sparing effect. It is a potentially dangerous practice to generously titrate benzodiazepines and subsequently rely on flumazenil, a benzodiazepine reversal agent, to offset overzealous benzodiazepine administration. The half-life of flumazenil is less than that of the benzodiazepines you seek to reverse.

2. C.O.Y.O.T.E. Call off your old tired ethos. Eliminate, not minimize, opioid administration. Five hundred years ago, it was an article of faith that the earth was flat. One observed the flat horizon and knew that if one sailed past it, one simply fell of the face of the earth. Today, we have a no less an absurd belief system perpetuating less-satisfactory PONV outcomes. Today's belief system states: 1) surgery is painful, 2) opioids are painkillers and 3) all surgery requires the use of some opioids. This syllogism is true only if PONV is not a concern. In 1999, Macario published a statistically validated survey that PONV is the No. 1 anesthesia outcome that patients most desire to avoid.

3. The answer to eliminating PONV is the elimination of opioids. Opioid-sensitive patients (female patients with previous PONV and/or motion sickness, for example) are the waiting bucket of gasoline. If you don't toss the match (opioids) into the bucket, you don't need to worry about which fire extinguisher (antiemetic) to administer. The point is, if you don't overmedicate, fast tracking takes care of itself.

4. Provide non-opioid, preemptive analgesia (NOPA) instead of opioids. Local analgesia in the form of lidocaine with epinephrine is far more effective than any systemic opioid for the prevention of pain. However, the injection itself is a very painful stimulus. Conscious sedation eschews general anesthesia as one means of suppressing the stimulus of the local anesthetic injection. Dissociative anesthesia is a well-published means of obviating the painful stimulus of the administration of local analgesia.

5. Post-operative pain management begins intra-operatively. Eliminating the noxious sensory input (the injection of local anesthesia) to the cortex while the patient is asleep is the first step to eliminating post-operative pain management issues. The brain cannot react to information it does not receive. Anesthesiologists and surgeons must think preemptively in the OR and address pain control and PONV prevention.

6. Ketamine is the only currently FDA-approved dissociative agent. Doesn't ketamine cause tachycardia, hypertension and hallucinations? Yes, but only if you administer ketamine as a sole agent or under circumstances insufficient to block these undesirable side effects. If you create the context of gradually titrated propofol hypnosis at BIS 70-75 before the administration

of a 50mg dissociative dose of ketamine, you'll avoid all of the historically published side effects. Two minutes to three minutes after this dose of ketamine, the patient will remain immobile for the injection of local anesthesia for approximately 10 minutes to 20 minutes.

7. Monitor the organ you're trying to medicate. Traditionally, the anesthesia provider attempts to surmise how asleep the patient is by assessing the heart rate and blood pressure and their changes. Another archaic belief system was that changes in the patient's level of consciousness would be reflected in the heart rate and blood pressure. The work of Ira Rampil, MS, MD, shows that our best measure of comparative anesthetic potency (minimum alveolar concentration or MAC) is only a measure of comparative spinal cord activity.

The brain is the anesthesiologist's target organ. The medications the professional anesthesia provider is administering aren't primarily designed to medicate the heart rate and blood pressure. Without measuring the level of consciousness, you can't differentiate patient movement originating from the spinal cord (meaning more local anesthesia) from patient movement originating in the brain (meaning more propofol). Level of consciousness monitoring is the only way to derive this information.

8. Differentiate the cause of patient movement. Medicate appropriately. All patients will exhibit movement with conscious sedation. Typically, the surgeon will exclaim, "The patient is too light." The anesthesiologist's rejoinder is typically, "He needs more local." Without the ability to measure either entity, you'll be trapped in a circular argument. If the BIS is 60-75 with an isoelectric EMG (adequate hypnosis), the patient needs more local while the anesthesiologist is giving a bit more propofol to suppress the patient's emergence.

9. Reinforce local analgesia. For the 3 Bs — brows, breasts and bellies — it is especially important for superior post-operative pain management to supplement intraoperative lidocaine with 0.25 percent bupivicaine.

- For endoscopic browlifts, reinjection of the supraorbital ridge and temporal fossa with 0.25 percent bupivicaine will facilitate a more pain-free emergence from propofol.
- Breast augmentation patients will benefit by placing 20cc of 0.25 percent bupivicaine in each pocket before closure.
- Bellies or abdominoplasties will benefit by using 0.25 percent bupivicaine under the rectus sheath and in the skin-closure line.

In all three situations, it's imperative that no more than 50cc 0.25 percent (or 125mg) total bupivicaine be injected. If more is administered, cardiac toxicity may cause the demise of the patient.

10. Minimally invasive anesthesia (MIA) technique for minimally invasive surgery. The MIA technique or BIS-monitored propofol ketamine (PK) MAC has a proven record for safety, simplicity and satisfaction. By virtually eliminating the twin scourges of PONV and post-op pain management with non-opioid preemptive analgesia, the MIA technique has established an unprecedented record of superior outcomes.

By speeding an uncomplicated emergence for ambulatory anesthesia, the MIA technique increases the efficiency of any facility. Increased facility efficiency translates into either shorter workdays or more cases per workday.

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