

Conscious Sedation and Special Needs Patients Revisited

I am responding to the Letter to the Editor entitled "Conscious Sedation and Special Needs Patients" by Dr. K. D. Schmidt. While I commend the author on his desire to treat this truly underserved group of people, some of his thoughts regarding intramuscular (IM) sedation are concerning. I will address two main points: The proposed technique and the educational issues.

The author espouses a technique of IM "sedation" with midazolam, promethazine and ketamine. A combination IM injection with doses of 10 mg midazolam, 25 mg promethazine and 100 mg ketamine are mentioned. No doubt this provides adequate conscious sedation for some larger patients. For smaller patients and sensitive larger patients, this may provide deep sedation and in the sensitive smaller patient, general anesthesia. The variability of response is quite large in the special needs population. IM administration is indeed more reliable than oral sedation. Of course, there are times, just like with inferior alveolar nerve injection for local anesthesia of the mandible, when there is inadvertent intravenous (IV) administration with a resultant general anesthesia induction dose, and a large one at that. Unfortunately, the pediatric dentist is not trained to proficiency in airway management and rescue. The author acknowledges the "adverse results," such as "airway blockage by a large, relaxed tongue". Indeed, ask any anesthesiologist, dental or medical, and they will acknowledge this concern. But the anesthesiologist is trained to manage this complication. Until the pediatric dentist is trained at least to the competence level in airway management for deeply sedated patients, and preferably including IV cannulation competence, I do not think this to be a good technique for most pediatric dentists. I am sure, however, that the technique described does in fact work, and with few tachycardic episodes for the dentist! But, if the morbidity and mortality rate is 1:5000, I think none of us would want to use that technique. The 1400 cases mentioned are just not enough to evaluate the safety of this technique. The time has gone for us to evaluate an anesthetic technique with a "This is how I do it and I never have a problem" attitude.

However, I truly commend the author for wanting to expand sedation to this highly underserved population that I have the privilege to treat. He is right that the missing link is education. But, the author's contention that any dentist with basic training is competent to utilize this technique is wrong and I would include even those with oral sedation training. The author states that you learn the actions "of a drug and then you must acquire a subtle "feel" for a drug" and only "after using certain drugs repeatedly does a clinician get a "feel". True. The way to do this is with real anesthesia training. If pediatric dentists were trained like oral surgeons, with four months of hospital operating room anesthesia experience and the equivalent of one full month of outpatient dental experience, I think this might be true. Maybe pediatric dental residencies should be expanded by six months? Alternatively, if dentist anesthesiologists were in every dental school, and ideally in every pediatric dental residency program, this could be accomplished more efficiently. I think most dentist anesthesiologists, along with myself, feel that IV sedation should be taught to EVERY general dentist as part of pre-doctoral education. Alas, the forces of organized dentistry have been opposed to this advancement. The consistent notable exception among specialties has been the pediatric dentists!

Let's do this right. Let's train all pediatric dentists to a competence level that would allow them to treat patients as Dr. Schmidt advocates. Barring that, we have to place patient safety first. Not every pediatric dentist has the training and experience of Dr. Schmidt. Let's work towards that.

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I read with interest the letter to the editor from K. Douglas Smith, DDS, appearing in the October 2005 issue of JDC. One thing on which I and Dr. Smith are in agreement is the incredible need and demand for dental care in the moderate to severely mentally and/or physically handicapped patient population. My experience of twenty-four years of the private practice of dental anesthesia and twenty-five years of part-time and full-time academic anesthesia has proved to me that general anesthesia is essential in the dental treatment of the described patient population. I believe those restoring dentists fortunate enough to have dentist anesthesiologists provide in-office anesthesia services will attest to my observations. Perhaps Dr. Smith's letter points out the consequences of having the American Dental Association vote down a specialty of dental anesthesiology. Having said what we might agree on, let me point out a few problems with Dr. Smith's "gold standard" suggestions.

It appears that Dr. Smith has *not* read the definition of conscious sedation accepted by the American Dental Association, the American Academy of Pediatric Dentistry, or the Indiana Dental Board. In the definition of conscious sedation, it is specified that the patient must be responsive to verbal command or respond appropriately to physical stimulation (excluding severe pain stimulation). Additionally, the patient must retain their ability to independently and continuously maintain their airway (ie, *not* have airway obstruction). Dr. Smith states in his letter that he *does* have airway obstruction and he is thereby stating that he does provide general anesthesia. I speculate that Dr. Smith cannot elicit a response to a verbal command in those patients who have verbal skills. In those that do not normally have verbal skills, proof of conscious sedation is *more* difficult. I suggest that Dr. Smith has been using general anesthesia to achieve his stated high incidence of success and perhaps he does not realize it. He is indeed fortunate that he has not caused serious morbidity or mortality. If he does have a poor outcome, will he administer resuscitation medications intramuscularly with the associated slow onset of action?

State law in Indiana requires either a general anesthesia permit or a "*light conscious sedation*" permit if a licensee desires to give parenteral medications to achieve light conscious sedation. Does Dr. Smith have a general anesthesia permit in

the state of Indiana? If so, I would simply say Dr. Smith is practicing below the standard of care of Indiana (and every other state). If Dr. Smith possesses a light conscious sedation permit and a poor outcome should occur, what are the penalties that Dr. Smith is risking? More importantly, is Dr. Smith prepared to accept the fact that his "gold standard" could cause the death of his patient? I can't imagine a dentist with extensive training in anesthesia who would be willing to state or testify that this regimen of medications would result in light conscious sedation. Having provided general anesthesia for handicapped patients for over thirty years, I would respectfully state that handicapped adults are a group of patients which represent some of the most challenging general anesthetics one can provide. I can confidently state that "light conscious sedation" will fail to manage the patient with severe mental retardation in a very high percentage of cases. Although Dr. Smith uses "subanesthetic doses" of the general anesthetic ketamine, when he mixes it with 5 to 10mg of midazolam (Versed) and 25mg of promethazine (Phenergan), how can he prove to the reader or his state board of examiners that the patient was sedated and not generally anesthetized?

I believe it would be a serious strategic error to design a pediatric dentistry curriculum to include Dr. Smith's "gold standard," which in my mind is really general anesthesia. I say this having taught pediatric residents sedation and general anesthesia skills for many years. Dr. Smith should be wary of trying pharmacologic behavior management techniques that have not been taught *in dental schools* on an undergraduate, postdoctoral, or a continuing education basis. It is my goal to send as many predoctoral and postdoctoral dentists as possible through general anesthesia rotations so that, after they finish their training, they are more aware of the definitions and limitations of all types of sedation in their practice of dentistry. I would hope that they would then safely and legally employ all types of behavior management that they have been trained to provide.

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