



Response: Ketamine Hallucination & Dose Limits Rebutted

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We sincerely thank Dr. Friedberg for having pioneered the concept of Opioid Free Anesthesia (OFA) and for his valuable reflection [1] about our recent paper “The Benefits of Opioid-Free Anesthesia and the Precautions Necessary when Employing it” [2]. As part of our practice in a large urban trauma center, we have to anesthetize most of our patients and the operations usually involve major physiological changes. Both circumstances lead to a significant activation of the sympathetic nervous system and make us conservative with the size of our bolus doses of ketamine.

We concede that in patients undergoing monitored anesthesia care for elective plastic surgery which is the area of Dr. Friedberg’s expertise, larger doses of ketamine can be administered without producing excessive tachycardia. However, we would like to reaffirm that in our patient population it is more cautious to administer multiple small doses of ketamine rather than a single big one if the patient has ischemic heart disease and is undergoing major surgery induced sympathetic stimulation. A low dose ketamine is effective in providing intraoperative analgesia [3,4]. Alternatively, dexmedetomidine can be given before ketamine to prevent tachycardia after a larger dose of ketamine.

We do occasionally observe hallucinations after ketamine in the recovery room and this may be due to many of our patients recreationally abusing methamphetamines. A recent study found that a combination of ketamine and amphetamine was associated with greater psychotic effects than methamphetamine alone [5]. Many of our patients also undergo prolonged operations with major fluid shift, electrolyte imbalance and blood transfusion. This may be another reason why we, unlike Dr. Friedberg, occasionally see hallucinations after ketamine.

Ketamine together with magnesium is an invaluable tool for the treatment of pain in patients with opioid induced hyperalgesia and in Dr. Friedberg’s observation has successfully eliminated opioid induced nausea and vomiting. In Dr. Friedberg’s plastic surgery experience, both tachycardia and hallucinations after ketamine were also prevented by prior administration of propofol [6,7]. We believe that this difference in observation has its origin in

the difference in patient populations and the nature of the surgery being performed in our respective institutions. We would like to once again thank Dr. Friedberg for his valuable feedback and for having pioneered the growing field of opioid free anesthesia.

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