Archives of Anesthesiology and Critical Care (Mar-Apr 2026); 12(2): 228-229.

Available online at http://aacc.tums.ac.ir

Letter to Editor

Partha's Intravenous KAMP Cocktail for Short Surgical Day Care Cases

Srinivasan Parthasarathy*

Department of Anaesthesiology, Mahatma Gandhi Medical College and Research Institute, Sri Balaji Vidyapeeth, Pondicherry, India.

ARTICLE INFO

Article history:
Received 16 August 2025
Revised 06 September 2025
Accepted 20 September 2025

Intravenous anesthesia (IVA), also known as total intravenous anesthesia (TIVA), is the maintenance of general anesthesia without inhaled anesthetics. Intravenous drugs are utilized to induce unconsciousness, amnesia, immobilization, and further maintenance. Midazolam, fentanyl, propofol, and ketamine can be administered alone or in a balanced manner in monitored anesthesia cases to give adequate comfort for patients during their surgery, while airway control is a challenge in certain cases. In this report of a series of 37 cases of pediatric religious circumcision, we administered a KAMP cocktail for successful anesthetic and surgical outcomes. All the patients had a preoperative fasting time of four hours, and no premedication was administered. Thirty-three cases were started on intravenous access on the mother's lap successfully without much crying. Four were given sevoflurane up to 8% for 2-3 minutes to start intravenous access, and then the agent was stopped. The mean age was 5.24 ±2.54 years. All patients were administered a combo of ketamine (1 mg/kg), atropine (0.02 mg/kg), midazolam (0.1 mg/kg), and pentazocine (0.2 to 0.3 mg/kg). All four drugs were taken in the same syringe and administered. (The technique has been routinely used by the author so far in around 5000 cases in different settings.) In this series, ten patients had mild apnea for 10–12 seconds, which was tackled with mask ventilation with oxygen for 2–3 minutes. Patients regained normal spontaneous breathing in less than a minute. All were given a ring block with a mixture of 2% lignocaine and 0.5% bupivacaine. The mean duration of surgery was 16 minutes. At the end of surgery, a paracetamol suppository was kept in appropriate doses. All the patients were quiet yet conscious, responding to commands, maintaining room air saturation of 98 or above immediately after surgery, and given feeds after 2-3 hours. Intravenous fluids were not administered. There was no incidence of postoperative nausea and vomiting. All the patients went home the same day, as there were no other complications. A 2 ml syringe with the label "combo" was used for intravenous drugs, while "LA" was the label used for local anesthetic mixtures in 5 ml syringes. The combination in the syringe was clear without any form of clouding.

TIVA is usually practiced in many neurosurgical and cardiac cases after securing the airway for long-duration surgeries. A few anesthesiologists use TIVA for short surgical cases [1]. The drugs routinely used are ketamine, propofol, remifentanil, and fentanyl. Pentazocine has a greater narcotic effect than fentanyl, which itself is a pure agonist with more effective analgesic properties than narcosis. This effect, we suggest, may be the cause of silent, calm, yet conscious patients. The respiratory depressant effects of pentazocine are less than fentanyl [2]. Ketamine use is usually preceded by the use of two drugs, namely anticholinergics to reduce secretion and benzodiazepines to decrease hallucinations. Hence, we added these two drugs to decrease the side effect of ketamine while giving some amnesic effect. The use of such drug combinations may be cheaper, along with ease of availability in countries like India. We suggest that this

The authors declare no conflicts of interest.

*Corresponding author.
E-mail address: painfreepartha@gmail.com

DOI: 10.18502/aacc.v12i2.20967

combo can be used for short surgical procedures like curettage and abscess drainage in adults also.

A combination of ketamine, midazolam, and atropine administered orally produces drowsiness and analgesia similar to drugs delivered intramuscularly [3]. It has an advantage over the intramuscular method in that it is painless and can be administered for small pediatric oncology operations with proper monitoring. In our case, we administered intravenous as a combo. We admit that this article has a few assumptions and is not entirely evidence-based. This cost-effective technique can be a boon to patient-overloaded hospitals.

A 1:10 ketofol mixture in TIVA yielded faster extubation and shorter PACU stay in children, enhancing recovery compared to 1:5 and 1:6.7 ratios during adenoidectomy and/or tonsillectomy [4]. In a study that compared TIVA combinations of propofol-ketamine and propofol-fentanyl in 34 patients. Propofol-ketamine maintained stable hemodynamics, while propofol-fentanyl resulted in greater cardiovascular depression. Recovery was better for ventilation in the former and movement in the latter group [5]. In our series we had both advantages. We had calm, quiet, normally breathing patients with unobstructed airways without the need for oxygen in the postoperative room. A report of combining pentazocine and midazolam, which effectively reduced pain and anxiety in hepatocellular carcinoma patients [6], has been published to support our combination.

To conclude, the use of a KAMP cocktail (ketamine, atropine, midazolam, and pentazocine) as TIVA for pediatric circumcision showed effective anesthesia and few complications while keeping the children calm and conscious at the end of their procedures. KAMP is inexpensive and has potential for use in small surgical procedures, with fewer airway maneuvers and recovery without postoperative nausea or vomiting.

References

[1] Hachenberg T. Perioperatives Management mit kurz wirksamen intravenösen Anästhetika [Perioperative management with short-acting intravenous anesthetics]. Anaesthesiol Reanim. 2000;25(6):144-50. German.

[2] Lawson JI, Milne MK. Intravenous sedation with diazepam and pentazocine. A study in dosage. Br Dent J. 1981; 151(11):379-80.

[3] Bhatnagar S, Mishra S, Gupta M, Srikanti M, Mondol A, Diwedi A. Efficacy and safety of a mixture of ketamine, midazolam and atropine for procedural sedation in paediatric oncology: a randomised study of oral versus intramuscular route. J Paediatr Child Health. 2008; 44(4):201-4.

[4] Biricik E, Karacaer F, Güleç E, Sürmelioğlu Ö, Ilgınel M, Özcengiz D. Comparison of TIVA with different combinations of ketamine-propofol mixtures in pediatric patients. J Anesth. 2018;32(1):104-111.

[5] Arya J R, Sojitra B H, Pandya M J. Comparison of Two Drug Combinations in Total Intravenous Anaesthesia: Propofol-Ketamine and Propofol-Fentanyl. National J Med Res. 2022; 12(04):77–82.

[6] Nakano M, Torisu Y, Nakagawa C, Ueda K, Kanai T, Saeki C, et al. Safety and efficacy of pentazocine-midazolam combination for pain and anxiety relief in radiofrequency ablation therapy for hepatocellular carcinoma. JGH Open. 2022; 6(8):569-576.