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Block 5 Written CAT
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Reference:
Ferguson, Ian et al. Propofol or Ketofol for Procedural Sedation and Analgesia in Emergency Medicine—The POKER Study: A Randomized Double-Blind Clinical Trial. Annals of Emergency Medicine. 68 (2016) 574–582.

Question:
Does using a 1:1 ketofol combination result in fewer adverse respiratory events requiring intervention than the use of propofol alone?

Intro:
Choice of sedative has been long contested in the field of Emergency Medicine as conscious sedation remains a core skill. Each choice has advantages and disadvantages. Propofol is associated with hypotension, loss of airway reflexes, hypoventilation, apnea, and hypoxia but has antiemetic and amnestic properties. Ketamine causes hypertension and tachycardia, as well as vomiting and emergence delirium, but is associated with maintained airway reflexes and is a potent analgesic. It has thereby been postulated that a combination of the two would result in fewer adverse effects as a result of using lower overall doses as well as the taking into account the "balancing" effects of each.

Methods/Results:
In a double-blinded fashion, patients were randomized to receive either ketofol or propofol according to a weight based dosing schedule. The primary outcome being measured was an adverse event (apnea, desaturation or hypoventilation) that was significant enough to require intervention by the sedating physician. A total of 573 patients were enrolled (292 in the propofol group and 281 in the ketofol group). The primary outcome was reached in 5% of the propofol group and 3% of the ketofol group. Patients receiving propofol were more likely to experience hypotension, whereas patients in the ketofol group experienced a higher incidence of severe emergence delirium but had lower pain scores at 30 minutes post-procedure.

Conclusion:
To date, this is the largest study of its kind. With a difference of 2% in primary outcome, the results remain consistent with previous studies – there is no significant difference between ketofol and propofol when used for conscious sedation. There were no serious adverse events in either arm of the study and so it is generally felt that both options are equally safe. Data from this study also revealed that patients experienced a shorter recovery time with propofol with a reduction median of about 9 minutes which may be an important consideration in a busy ED.