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“Ketofol for Procedural Sedation in the Emergency Department”

Background: Procedural sedation in the emergency department (ED) frequently involves the use of propofol, ketamine, or a combination of both. The ketamine-propofol combination (“ketofol”) has been shown to be safe and effective; however, there is significant variability in how these drugs are administered in clinical practice, including differences in sequencing and dosing strategies. Limited evidence displays comparison of various administration methods along with their associated outcomes.

Objective: To compare methods of administering ketamine, propofol, and ketofol among emergency department providers and to evaluate associated side effects following procedural sedation.

Methods: This prospective observational study evaluated ED procedural sedation practices by examining different administration strategies including sequential administration: propofol followed by ketamine (propofol-first group), ketamine followed by propofol (ketamine-first group), and a combined ketamine-propofol administration (ketofol group). Data were collected in real time on physician-selected approaches, patient characteristics, and medication-related adverse effects, including respiratory events, hemodynamic changes, and emergence reactions.

Results: A total of 48 procedural sedation cases were included. The most common administration strategy was ketamine-first (47.9%), followed by ketofol (27.1%), and propofol-first (25%). Patient demographics, presentation, and procedure type were similar between groups. The dose of ketamine and propofol did not differ between groups. Adverse events were infrequent across all groups, with no statistically significant differences observed. No adverse events occurred in the propofol-first group. Physician satisfaction and physician perceived patient satisfaction were highest in the ketamine-first group; however, no statistically significant differences in satisfaction were observed between groups.

Conclusion: Significant variability exists in the administration of ketamine and propofol for ED procedural sedation, with ketamine most commonly used as the initial agent in sequencing. All strategies demonstrated favorable safety profiles, with no statistically significant differences in

adverse events or satisfaction between groups. These findings highlight the need for further research and potential standardization of sedation practices to optimize patient outcomes and physician satisfaction.