Ketofol Causes Less Hypotension than Propofol Alone

Adding ketamine to propofol substantially reduced the incidence of significant hypotension in a healthy general anesthesia population.

Ketamine is a dissociative anesthetic agent with analgesic properties and inherent hemodynamic stability because it increases circulating catecholamine levels. It has been used in combination with propofol for procedural sedation, but few studies have directly compared the combination to propofol alone. These investigators compared the hemodynamic effects of ketofol (ketamine plus propofol) versus propofol alone in a randomized study of 85 healthy patients aged 18 to 60 undergoing scheduled surgery.

General anesthesia was induced with ketofol (0.75 mg/kg ketamine plus 1.5 mg/kg propofol) or propofol (2 mg/kg), and blood pressure was assessed after 5, 10, and 30 minutes. Anesthesia was maintained with inhalational agents. Surgery was started 15 minutes after induction. The main outcome — a decrease in systolic blood pressure of >20% from baseline — occurred in significantly more propofol than ketofol recipients at 5 minutes (49% vs. 12%) and at 10 minutes (67% vs. 39%). No significant difference was noted at 30 minutes. No emergence reactions were observed, and nausea was similar in both groups.

Comment: Ketamine is an excellent induction agent for rapid sequence intubation of patients with hypotension. This study suggests that adding ketamine to propofol, in the dose ratios above, mitigates the hypotension that often occurs with propofol induction in healthy patients. Although it is likely that some benefit will also extend to patients who are hypotensive at the time of induction, this study provides no evidence that ketamine plus propofol would be preferable — or even equivalent — to ketamine alone.

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