Etomidate Does Not Increase Mortality in Intubated Septic Patients

In large cohort of intensive care unit patients with sepsis, use of etomidate as the induction agent was not associated with increased mortality or other adverse outcomes.

Single-dose etomidate for rapid sequence induction can cause transient adrenal suppression, but data are mixed regarding its clinical significance. To determine whether etomidate is associated with mortality in critically ill patients, researchers retrospectively reviewed data for 2014 septic adults enrolled in the Philips eICU Research Institute database who were intubated in an intensive care unit between 2008 and 2010. Of these, 1102 patients received single-dose etomidate, and 912 received other induction agents.

Patients receiving etomidate were older, had lower blood pressure before intubation, and were more likely to receive steroids. The two groups were similar in use of vasopressors before intubation and predicted mortality. No differences were detected between groups for in-hospital mortality (37% and 38%), duration of mechanical ventilation, or length of stay in the hospital or intensive care unit. In adjusted regression analysis, there was no association between use of etomidate and mortality.

Comment: Although patients who received etomidate potentially were at higher risk (older age, hypotension), there was no association between etomidate use and any adverse outcome. The findings are consistent with those from the largest randomized trial of etomidate in critically ill patients (JW Emerg Med Jul 2 2009). A surfeit of very poor literature has led many experts to unadvisedly call for a ban on etomidate, which is one of our most hemodynamically stable induction agents. Perhaps this study, along with the few other well-conducted trials, will finally begin to put this issue to bed. Etomidate is a safe and effective option for rapid sequence induction in septic and critically ill patients.

— Kristi L. Koenig, MD, FACEP, FIFEM

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