Etomidate or Midazolam for Rapid Sequence Induction in Patients with Suspected Sepsis?

Outcomes did not differ significantly with the two induction agents.

Despite studies showing no increase in adverse outcomes related to etomidate induction for intubation of patients with shock (JW Emerg Med Jul 2 2009 and JW Emerg Med Feb 13 2009), some clinicians still oppose its use in such patients. In this prospective, double-blind, randomized trial, 122 adult patients who presented to a single emergency department with suspected sepsis and indication for intubation received either midazolam (0.1 mg/kg) or etomidate (0.3 mg/kg) for induction. Sepsis was confirmed in 96 patients who had clear evidence of infection and fulfilled two of four criteria for systemic inflammatory response syndrome.

The midazolam and etomidate groups demonstrated no significant differences in median hospital length of stay (LOS) (9.5 and 7.3 days), median intensive care unit LOS (4.2 and 3.1 days), median ventilator days (2.8 and 2.1 days), or inhospital mortality (21% and 26%). Subgroup analysis of patients who survived to discharge also showed no difference in median hospital LOS between midazolam and etomidate recipients (11.3 and 11.8 days).

Comment: In this study, use of a single bolus of etomidate for induction in patients with sepsis was not associated with any deleterious outcomes. Etomidate is an ideal induction agent because of its predictable dosing, rapid onset, short duration of action, and excellent hemodynamic stability. This report adds to a growing body of well-designed studies that refute the assertion that etomidate should not be used in patients with sepsis.

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