Etomidate Appears to Be Safe for RSI in Children

Etomidate, with its superior hemodynamic safety profile, has become the induction agent of choice for rapid sequence intubation (RSI) in many emergency departments, but its use in children is not recommended by the manufacturer. These authors conducted a retrospective chart review to assess the safety of this agent for RSI in children younger than 10 years.

Over the nearly 5-year study period, 105 children received a median dose of 0.32 mg/kg for induction. Among the 52 children who had complete vital signs data, there was no significant difference in heart rate or blood pressure before and after intubation. Four children had adverse events near the time of intubation: vomiting in 3 (1 before intubation, and 2 after the intubation drugs wore off) and transient desaturation in 1. No patient developed clinically significant adrenal insufficiency. Four children developed seizures after hospital admission; all had known seizure disorders and presented to the ED with seizures.

Comment: Etomidate is an extremely useful agent for RSI in adults, and studies such as this one are important to document its safety and efficacy in children, particularly since the manufacturer does not recommend using it in children. This study, and several others, shows that etomidate appears to be as safe and effective in children as it is in adults.

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