Underdosing of Midazolam for RSI in the ED
Is Common

Recommended midazolam doses differ for induction and sedation, but the lower sedation doses often are mistakenly used to induce unconsciousness.

An integral component of rapid sequence intubation (RSI) is administration of an induction agent to induce unconsciousness before the onset of paralysis. One such agent, midazolam, is used in the emergency department for both induction and sedation. The recommended dose depends on the reason for use: The dose required to induce unconsciousness is about 5 times higher than that used for sedation. These authors studied whether midazolam is used at the recommended induction doses when it is administered as an induction agent for RSI in the ED. Data were obtained from the National Emergency Airway Registry (a multicenter database of intubations performed in the ED).

Of 1288 patients entered in the registry from June 1996 to September 1997, 888 underwent RSI; midazolam was used as the sole induction agent in 140 patients. The mean dosage of midazolam was 0.08 mg/kg (range, 0.03-0.18 mg/kg) in children and 0.05 mg/kg (range, 0.01-0.24 mg/kg) in adults. Fifty-six percent of children and 92% of adults received less than the minimum recommended dosage of 0.1 mg/kg.

Comment: Midazolam is so frequently used for sedation in the ED that it is not surprising that emergency physicians would choose the more familiar lower doses when administering this agent for induction. EPs should become familiar with the higher recommended doses for induction (0.1-0.3 mg/kg) in order to best use midazolam for this purpose.

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