Topical Tracheal Lidocaine Improves Endotracheal Tube Tolerance

Nonparalyzed patients often cough during intubation. In patients who are emerging from general anesthesia, such coughing is observed both before and after extubation and can lead to adverse effects, including hypertension, tachyarrhythmias, and increased intracranial pressure. To assess whether intratracheal administration of lidocaine before intubation reduces coughing on emergence, investigators conducted a randomized, double-blind, controlled trial in 50 women (American Society of Anesthesiologists class 1 or 2) who were undergoing elective gynecologic surgery.

Patients underwent general anesthesia with propofol, fentanyl, and rocuronium. Two minutes later, laryngoscopy was performed, and lidocaine (160 mg) or placebo was administered via commercial laryngotracheal anesthesia kits that allow insertion of a delivery device through the vocal cords. Patients were intubated immediately after instillation of the study drug. Mean case duration was 85 ± 25 minutes; 5 patients were anesthetized for 120 to 140 minutes. On emergence from anesthesia, significantly fewer patients in the lidocaine group than in the placebo group coughed before extubation (26% vs. 70%) and after extubation (4% vs. 30%).

Comment: The results of this small study support use of intratracheal lidocaine to improve endotracheal tube tolerance. In the emergency department, this is relevant only in cases of "awake" intubation, and in such cases, applying topical anesthesia to the supraglottic airway already is usual practice. Instilling 5 mL to 10 mL of 2% lidocaine down the working channel of a fiberoptic scope or spraying lidocaine through the cords during direct laryngoscopy can improve tube tolerance and also make intubation easier. If preintubation lidocaine was not used and a patient is coughing or bucking after intubation, spraying 5 mL to 10 mL of 2% cardiac lidocaine down the tube should resolve the problem promptly. This study also could be the first to be published with a title contaminated by the "noun as a verb" illiteracy that is rampant in conversational medicine, a failure on the parts of both the authors and the editors.

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