

Nebulized lidocaine decreases the discomfort of nasogastric tube insertion: a randomized, double-blind trial

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Abstract

Study objective

Nasogastric tube insertion is a common emergency department (ED) procedure that is associated with considerable patient discomfort. The safety and efficacy of nebulized lidocaine for upper airway anesthesia have previously been demonstrated. We determine whether nebulized lidocaine administered before nasogastric tube insertion significantly reduces patient discomfort.

Methods

A double-blind, placebo-controlled, randomized clinical trial of adult patients was conducted in the EDs of 2 university hospitals. Twenty-nine participants were administered nebulized lidocaine (4 mL 10%), and 21 participants received nebulized normal saline solution. Patient discomfort was measured using a 100-mm visual analog scale. The difficulty of nasogastric tube insertion was evaluated using a 5-point Likert scale.

Results

There was a clinical and statistical significant difference in patient discomfort associated with the passage of the nasogastric tube between nebulized lidocaine and placebo groups (mean visual analog scale score 37.7 versus 59.3 mm, respectively; difference between group means 21.6 mm; 95% confidence interval [CI] 5.3 to 38.0 mm). There was not a detectable difference in difficulty with the passage of the nasogastric tube between the 2 groups (median 2 versus 2; median difference 0; 95% CI -1 to 1). Epistaxis occurred more frequently in the lidocaine group (17% versus 0%; difference 17%; 95% CI 3.5% to 31%).

Conclusion

Nebulized lidocaine decreases the discomfort of nasogastric tube insertion and should be considered before passing a nasogastric tube. An increased frequency of epistaxis, however, may be associated with its use.