## CORRESPONDENCE

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## Safer Endotracheal Tube Exchange Technique

To the Editor:—We read with interest the letter to the editor describing the conversion of a nasal to an orotracheal intubation using an endotracheal tube exchanger in a patient with a proven difficult airway.¹ Even though this endotracheal tube exchange was successfully performed and no desaturation occurred, a safer endotracheal tube exchange technique was previously described with a flexible fiberoptic bronchoscope instead of an endotracheal tube exchanger.² We are concerned about the above reading for the following reason.

- 1. If an existing nasal endotracheal tube must be exchanged to an oral endotracheal tube, why not place a small diameter tube exchanger like a #11 Cook airway exchange catheter (Cook Critical Care, Bloomington, IN) orally alongside the existing nasal endotracheal tube.3 Under uninterrupted ventilation and before disconnection of the nasal endotracheal tube, correct intratracheal positioning of this airway exchange catheter can be verified by CO<sub>2</sub> detection or fiberoptic bronchoscopy via the nasal endotracheal tube. A second small diameter tube exchanger can then be placed through the nasal endotracheal tube before pulling the nasal endotracheal tube back into the posterior pharynx. Should the advancement of the oral endotracheal tube prove to be unsuccessful (which does occur), then it may be possible to readvance the old nasal endotracheal tube, which is still sitting in the posterior pharynx, into the trachea. The letter writer's technique, pulling a tube exchanger through the pharynx from a nasal path to an oral path, all in the absence of a secured endotracheal tube, seems to be unnecessary and dangerous airway manipulation.
- 2. It is not clear why, in a patient with a proven difficult oral intubation, a successfully placed nasal endotracheal tube needed to be converted to an oral endotracheal tube. Nasal endotracheal tubes in awake patients are better tolerated than oral endotracheal tubes. Further, extubation of a patient with a proven difficult airway, using a small diameter tube exchanger to maintain airway access,

may be safer *via* the nasal route because reintubation depends less on patient cooperation.<sup>3,4</sup> Patients with difficult airways while under optimized conditions in the operating room, asleep and relaxed, who require reintubation after a trial of extubation frequently are now distressed and uncooperative. This renders the oral route to the airway more problematic, if not impossible, even if a tube exchanger is in place.

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## References

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- 1. Cooper RM: Conversion of a nasal to an orotracheal intubation using an endotracheal tube exchanger. Anesthesiology 1997; 87:717-8
- 2. Rosenbaum SH, Rosenbaum LM, Cole RP, Askanazi J, Hyman A: Use of the flexible fiberoptic bronchoscope to change endotracheal tubes in critically ill patients. Anesthesiology 1981; 54:169-70
- 3. Hartmannsgruber MWB, Loudermilk EP, Stolzfus DP: Prolonged use of a Cook airway exchange catheter obviated the need for postoperative tracheostomy in an adult patient. J Clin Anesth 1997; 9:496–8
- 4. Loudermilk EP, Hartmannsgruber M, Stoltzfus DP, Langevin PB: A prospective study of the safety of tracheal extubation using a pediatric airway exchange catheter for patients with a known difficult airway. Chest 1997; 111(6):1660-5

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## An Alternative Method for Conversion of a Nasal to an Orotracheal Intubation

To the Editor: — We read with great interest the description by Dr. Cooper of his conversion of a nasal to an orotracheal intubation using an endotracheal tube changer *via* manipulation of a flexible endotracheal ventilation tube exchanger from the nasal passage into the oropharynx with two Magill forceps (ANESTHESIOLOGY 1997; 87:717-8). The technique seems rather cumbersome, traumatic, and perhaps a bit risky. Although it is easy to thread a flexible tube exchanger through an endotracheal tube, it lacks the rigidity needed

to thread the replacement tube over the catheter. In addition with the pulling by the Magill forceps, one would have to be concerned about the possibility of the catheter being inadvertently pulled out of the trachea and of losing control of the airway in a patient in whom the glottis could not be directly visualized. A similar situation occurred at our institution during which a conversion of a nasal to an orotracheal intubation became necessary.

Briefly, the patient was an unhelmeted 28-yr-old man who pre-