

FIG. 1. Steerable catheter is advanced into the fluoroscopically visible trachea via the endotracheal tube lumen.

his cough and breathe slowly and deeply, the catheter is advanced into the fluoroscopically visible trachea. The endotracheal tube is gently advanced over the catheter, which is then removed. The patient is then immediately transported to the operating room and anesthesia induced in the usual manner.

This technique has proven successful in all cases wherein it has been employed, despite the presence of significant oropharyngeal hemorrhage, cervical spine im-

mobility or airway edema. The procedure has been found to be simple, quick, and well-tolerated in mildly sedated patients, even those in whom endotracheal intubation using a variety of other maneuvers proved impossible. There has been no associated morbidity.

We now electively use this method when preoperative examination reveals technically difficult intubation to be likely, as in cases of upper airway mass, cervical spine, or mandibular immobility. The small size of the catheter enables its application with larger pediatric as well as double lumen endotracheal tubes. The generally widespread availability of this catheter, and its skilled use by radiologists in a variety of fluoroscopic procedures, make this technique worthy of consideration to facilitate otherwise difficult endotracheal intubation.

A. J. DAVIDSON, M.D.
Resident in Training (Anesthesiology)

A. C. REYNOLDS, M.D.
Assistant Professor (Anesthesiology)

E. T. STEWART, M.D.
Professor (Radiology)

*Departments of Anesthesiology and Radiology
Medical College of Wisconsin
Milwaukee, Wisconsin 53226*

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Emergency Transtracheal Ventilation

To the Editor:—A patient in our hospital with a massive tumor of the pharynx had acute upper airway obstruction during an attempted emergency tracheostomy. The anesthesiologists involved were able to ventilate the patient adequately until completion of tracheostomy by means of intermittent transtracheal injection of oxygen. Although the concept of emergency transtracheal ventilation by means of needles or catheters is well estab-

lished,¹⁻³ connection of a tracheal device to a controllable source of oxygen can be difficult or time consuming.

We have devised a tubing set which fits directly to an anesthesia machine. One end of a six-foot length of thick-walled, transparent plastic tubing is secured to Becton-Dickinson® catheter tip (#3092) and male Luer-lok (#3114) adapters. The other end is pressed over a metal endotracheal tube adapter which slips directly into the

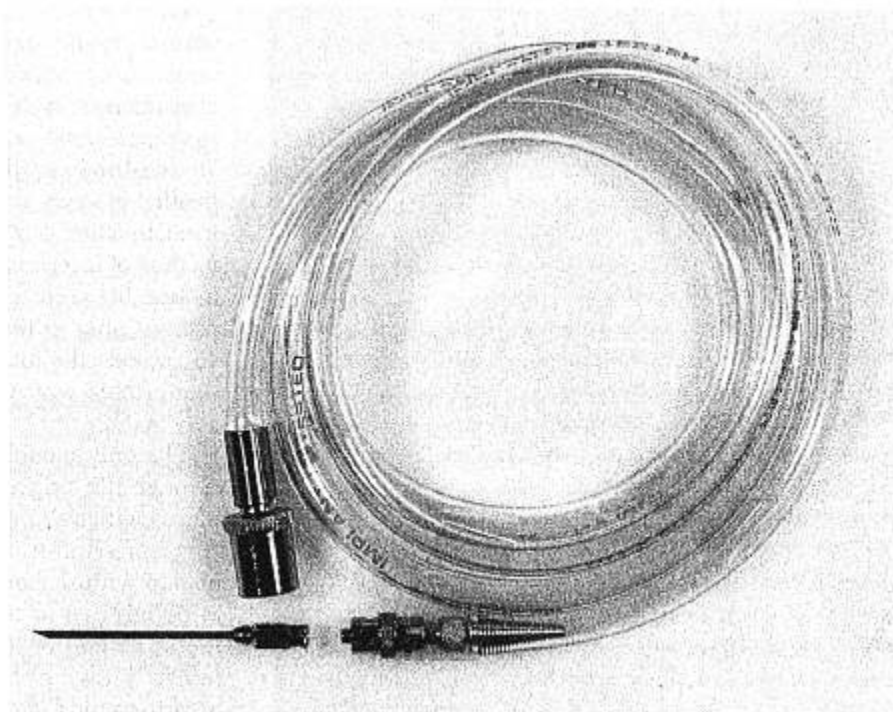


FIG. 1. Tubing and needle set with anesthesia machine adapter for transtracheal ventilation.

fresh gas outlet of our Ohio® anesthesia machines (fig. 1). Spare Foregger® outlet fittings are used for our Foregger® machines. We have attached a sterile, packaged tubing set and 13-gauge Luer-lok needle under the monitoring shelf of each of our anesthesia machines. When no other means of ventilation is possible, transtracheal ventilation can be accomplished following needle puncture of the cricothyroid membrane and verification of proper placement with a syringe. After connection of the needle to the tubing set, activation of the oxygen flush valve achieves positive pressure lung inflation. When the oxygen flush valve is released exhalation occurs passively during the interval between oxygen injections. This is possible because the obstruction in the upper airway is most likely due to a valve-like effect and not a total obstruction. Rather than depend upon on-the-spot ingenuity⁴ during airway management emergencies, we have a quick, simple means for implementing transtracheal ventilation available on each anesthesia machine.

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EVERARD A. DELISSER, M. D.
*Chief Anesthesiology Service
Miami VA Medical Center and
Department of Anesthesiology
University of Miami School of Medicine
Miami, Florida 33101*

STANLEY MURAVCHICK, M.D., PH.D.
*Associate Professor of Anesthesiology
University of Pennsylvania School of Medicine
Philadelphia, Pennsylvania 19104*

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A Low Cost, Comfortable and Effective Anesthesia Earpiece

To the Editor:—Continuous monitoring of heart and breath sounds is a routine practice during anesthesia. Medical personnel specializing in the practice of anes-

thesia generally have custom-fitted earpieces for this purpose. These are relatively expensive, \$15.00-\$25.00, and require two to four weeks to be manufactured after fit-