seem unwise to subject patients to the potential hazard of radial-artery ligation following excision of a pseudoaneurysm. Advances in microsurgical techniques now permit repair of the radial artery without resorting to arterial ligation.

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A Safe Technique for Changing Endotracheal Tubes

To the Editor:—The need to change endotracheal tubes arises when the cuff of an existing tube is found to be leaking or when the tube in place is too small for satisfactory pulmonary toilet or fiberoptic bronchoscopy. The technique usually employed is laryngoscopy with topical anesthesia and sedation; the actual change is then made under direct vision. If for any reason the new tube cannot be successfully inserted expeditiously, the loss of a patent airway in a patient during mechanical ventilation could lead to disastrous consequences. In some patients massive swelling in the head and neck area may make direct laryngoscopy impossible. In other instances the original tube may have been inserted with considerable difficulty and the anesthesiologist is reluctant to change the tube unless absolutely necessary.

In analogy to the vascular guide-wire technology advanced by Seldinger,1 we thought that endotracheal tubes could be changed readily over a firmatraumatic and long guide introduced into the trachea through the tube in situ. After considering nasogastric tubes, suction tubing, pressure monitoring tubing, and ureteral catheters, we came upon an endotracheal tube introducer,* originally designed to facilitate difficult oro-tracheal intubation with direct laryngoscopy. It is about 65 cm long, 15 Fr in diameter, flexible, and nontraumatic. The technique we use is as follows. The existing tube is cut and shortened as much as possible, the lubricated guide is passed through the tube into the trachea, the cuff is deflated, and the tube is removed, leaving the guide in the trachea. The new endotracheal tube is now passed over the guide, the cuff inflated, and the guide withdrawn. The correct position of the tube is confirmed by auscultation and by chest x-ray. If a nasotracheal tube is to be changed, topical application of cocaine is used for vasoconstriction and analgesia. Of course, the usual equipment for intubation and resuscitation should always be at hand. Using the technique and equipment described, we have performed more than 50 such procedures without difficulty.

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