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A Contingency Plan for Tracheal Intubation

To the Editor:—We recently cared for a patient in whom tracheal intubation and ventilation of the lungs were both known to be impossible and who also needed a malfunctioning tracheostomy tube removed prior to rigid bronchoscopy through the tracheostomy stoma. Because it was possible that the rigid bronchoscope would not be passed correctly, it was essential to have a back-up emergency ventilation plan.

Our case involved a 2-yr-old girl born with Antley-Bixler syndrome. At 3 months of age she required emergency tracheostomy for respiratory distress due to upper airway obstruction. She was sent home with an open tracheostomy stoma that was kept open by intermittent tracheal suctioning. She now presented with recurrent respiratory distress. Her most recent attack had to be relieved by inserting an uncuffed 3.5-mm endotracheal (ET) tube through the tracheostomy site to the 8–9-mm mark in order to maintain a patent airway (a regular tracheostomy tube would not satisfactorily relieve the obstruction). The provisional diagnosis was a distal tracheal granuloma and the plan was to establish the airway from above (rigid bronchoscope per os to the proximal trachea) prior to removing the tracheostomy tube so that ventilation would be assured while the entire trachea was being visualized (and, perhaps, laser any resectable obstructing lesion).

After inducing anesthesia by administering isoflurane through the intubated tracheostomy site, numerous attempts to establish an oral-tracheal airway by multiple types and combinations of laryngoscopy and bronchoscopy were all unsuccessful; there simply did not appear to be an open connection between the pharynx and trachea.

Since the tracheal obstruction had to be relieved and the obstructed site was most probably distal to the tracheostomy stoma, the decision was made to try to visualize the lesion with a rigid bronchoscope passed through the tracheostomy stoma. This procedure, however, required removal of the 3.5-mm ET tube stomal airway. To ensure that the airway would not be completely lost if the rigid bronchoscope could not be passed through the tracheostomy stoma, an 0.021-G Cook PWG 2588 straight guidewire was easily inserted (without any resistance) through the 3.5-mm ET tube 15–18 mm into the trachea. The ET tube was then removed over the guidewire and an 18-G iv catheter was threaded over the wire and the tip brought close to the tracheostomy stoma. If re-establishment of the tracheal airway had then not been possible, the 18-G iv catheter could then be guided over the

straight wire and ventilation could be re-established by jet ventilation.¹ Fortunately the bronchoscope could be passed through the tracheostomy stoma alongside the guidewire and multiple large redundant folds of tracheal mucosa were visualized. After bronchoscopy, a new 3.5-mm ET tube was reinserted over the guidewire into the trachea, the guidewire was removed, and the patient returned to the intensive care unit.

In summary, we think that in situations where an airway cannot be established from above, and the only airway available is through a tracheostomy site, the tracheostomy airway should not be abandoned until at least a guidewire is placed within the trachea and, therefore, can be available for the establishment of TTJV if the airway is subsequently lost. The guidewire should be passed well into the tracheo-bronchial tree, and the iv catheter chosen should have an internal diameter nearly equal to the outside diameter of the guidewire. This combination of guidewire/iv catheter minimizes the chance of tissue obstruction and maximizes the likelihood of tracheal cannulation.

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All Subjects of a Study Should Provide Informed Consent

To the Editor:—I enjoyed reading the article by Cook *et al.* describing their comparison between handwritten and automatic blood pressure records.¹ I was intrigued by one aspect of their study design: they appear to have obtained consent from the wrong people. They were quite obviously studying the behavior of the anesthesiologists and nurse anesthetists who were the unwitting participants in their study. Obtaining “informed” consent from the patients apparently served to distract the operating room personnel from the true purpose and the true subjects of the study.

Although it is presumed that no harm came to the anesthesiologists who participated in this study, ethical standards for human experimentation require informed consent for subjects (including physicians) who participate in human studies.² Even when the risks to the partic-

ipant are remote, informed consent is required “to respect individual autonomy by disclosing all germane information about the research and assuring the right of choice.”³

Compared with the flagrant abuse of human subjects that Henry Beecher publicized two decades ago, the oversight in this study is only a peccadillo.⁴ However, the human rights of medical personnel (and even residents!) must be respected when they are the subjects of clinical trials.

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