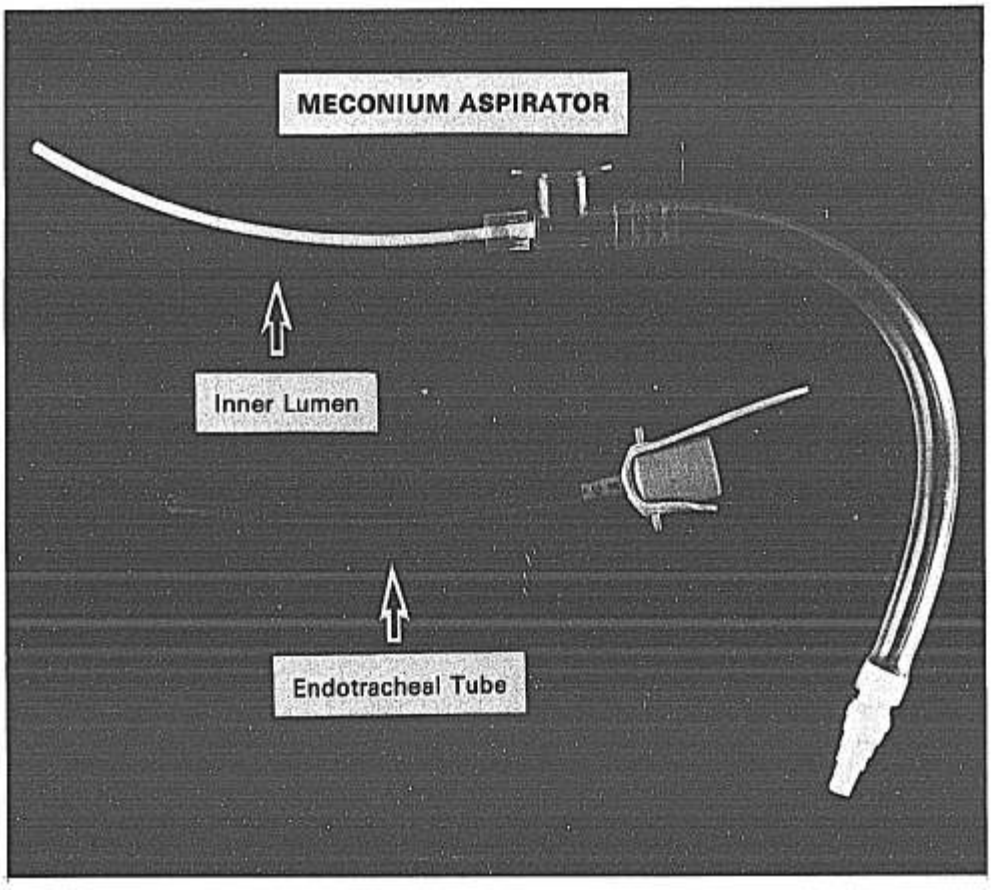

FIG. 1. Hollow tube that fits into endotracheal tube permits aspiration of meconium without need to remove 15-mm adapter.

RICHARD R. RICKETTS, M.D.
Department of Surgery

Emory University School of Medicine
69 Butler Street, S.E.,
Atlanta, Georgia 30303

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A Maneuver to Facilitate Flexible Fiberoptic Intubation

To the Editor:—A problem that we consistently encounter during routine oral fiberoptic intubations is the inability to smoothly pass an endotracheal tube over the laryngoscope and into the trachea despite satisfactory placement of the scope through the vocal folds. The tube tends to get caught in the hypopharynx, preventing or delaying successful intubation. To better define this problem as well as formulate a solution, we studied routine fiberoptic intubations in a group of healthy patients after obtaining informed consent.

Initially, 15 consecutive healthy adult patients undergoing general anesthesia for extracorporeal shock-wave lithotripsy had anesthesia induced with thiopental. Following paralysis with succinylcholine, the patients' lungs were ventilated with oxygen and enflurane. Oral flexible fiberoptic laryngoscopy was performed using an Olympus LF-1 fiberscope. After insertion of the tip of the scope well into the trachea, a disposable plastic endotracheal tube (Mallinckrodt ID 7.0–7.5 for women, 7.5–8.0 for men) was advanced over the scope with the bevel of the Murphy tip pointing to the right (*i.e.*, with the natural curve of the tube aligned vertically with respect to the patient). If an obstruction was met, the tube was withdrawn 1 cm, rotated 90° counterclockwise, then readvanced towards the larynx. In an additional nine patients this process was videotaped using a Roberts Monitoring Laryngoscope. This allowed us to visualize the pharyngeal structures during the fi-

beroptic intubation as well as during insertion of the endotracheal tube.

In the first 15 patients, we encountered difficulty in passing an endotracheal tube over the scope 80% of the time (12 patients). In these 12 cases, withdrawing the tube 1 cm, rotating the tube 90° counterclockwise, then reinserting the tube, relieved the obstruction. Similar results were obtained in seven of the nine patients in whom the process was videotaped. A consistent finding in these patients was the "hanging up" of the endotracheal tube on the right arytenoid cartilage when the Murphy tip was aligned to the right. A 90° counterclockwise shift (Murphy tip now at 12 o'clock) allowed the tube to enter the trachea without resistance.

In a previous study of nasal fiberoptic intubation, Ovassapian *et al.* described a similar "hanging up" of the endotracheal tube (though much less frequently) and postulated that the point of obstruction was the epiglottis.[1] They suggested rotating the tube 180° to relieve the obstruction. Rogers *et al.* make a similar suggestion.[2] We feel that a 90° rotation is optimal because this realigns the Murphy tip from the horizontal to the vertical plane, making it less likely to encounter any laryngeal structures. When we intentionally rotated the endotracheal tube 180° counterclockwise, we observed the tip to obstruct against the left arytenoid. We think obstruction against the arytenoid occurs because the center of the laryngeal opening is occupied by the bundle of the fiberscope that acts as a stylet forcing the tip of the endotracheal tube laterally that aligns the tip of the endotracheal tube with the right arytenoid. The simple maneuver we describe improves success with flexible fiberoptic intubations.

DONALD SCHWARTZ, M.D.
CALVIN JOHNSON, M.D.
JAMES ROBERTS, M.D.
Department of Anesthesia
Massachusetts General Hospital
Boston, Massachusetts 02114

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Practice Standards—The Emperor's Old Clothes

To the Editor:—In his erudite editorial "Practice Standards: The Midas Touch or The Emperor's New Clothes?" Dr. Orkin illuminates reasons why anesthesiologists and health care officials need be wary about monitoring devices and practice standards.[1] He and other scientists remind us that faith in things that make sense intuitively may have only mythical power and may reinforce our prejudice. But after nodding my head as I read his words, I began to wonder about the rationale for many things that we do in anesthesia. For example, Dr. Orkin has determined that poor medical judgment had contributed to some of the debacles cited by Dr. Eichhorn[2] (cases 2, 7, and 8). I concur. But where is the scientific evidence that would prove that it is poor clinical judgment to infuse succinylcholine without mechanical or at least assisted ventilation, to administer high spinal anesthesia in a patient with a wired jaw, or to induce general anesthesia without first securing the airway of a patient with a pharyngeal tumor? Do we need prospective, controlled studies with outcome measurements to establish that these actions constitute poor clinical judgment?

I do not suggest such studies. I am comfortable with a long list of beliefs and practices in anesthesia—and for that matter in many other fields within and without medicine—that we have adopted because the good sense of these practices is self-evident. In anesthesia, this list would include the physical examination, checking temperature, recording arterial pressure, monitoring the electrocardiogram, assessing arterial blood gases, stimulating peripheral nerves, using oximetry, and capnography to monitor respired gases, and, surely, adhering to "safe standards" of care.

Dr. Orkin wonders whether benefits, risks, and costs associated with new monitoring or practice standards are balanced, but what about the old? Might we attain greater benefits, less risk, and lower costs by replacing some of the established, but scientifically unproven, monitors and practices with monitoring such as pulse oximetry and capnography? Should we follow our instincts and ask for instruments to help us discover what may lie just beyond the reach of our senses, such as a slowly declining arterial pressure, myocardial ischemia, the onset of desaturation, or inadequate ventilation?

Finally, I worry about outcome studies. Is it enough to count deaths and the number of patients with devastating brain damage? Must we not also consider that hypoxic damage has a range that includes barely perceptible damage as well as devastating brain damage and death? Must we not suspect a far greater incidence of mild brain damage than severe brain damage and death? Is it possible that some of our patients suffer subtle hypoxic damage that leaves them well enough to get along but prevents them from functioning at the peak of their capacity? Should we try to prevent such subtle hypoxic damage?

The problem of how to introduce new methods into medicine—with or without controlled studies—has been with us for many years. So has the problem of using procedures and medications suspected of being harmful or inefficacious. As long as we have no immediate and specific satisfactory measure of outcome, we cannot hope to generate scientifically valid arguments for or against a method, an instrument, or a practice. The best we can do is to follow our clinical wits. To many of us, our instincts suggest that capnography and pulse oximetry have much to offer at very little risk to our patients and at a reasonable expense.

That new methods can cause problems we all know. Just as we know that wearing seatbelts in automobiles occasionally has caused deaths, but that wearing the belt has prevented many more deaths than it has caused.