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Endotracheal Intubation Assisted with a Pencil Torch

To the Editor:—Often, during tracheal intubation, the light on the laryngoscope fails at the moment of laryngeal visualization for such reasons as poor electrical contact between the blade and the handle or bulb and electric line, a broken bulb, or a weak battery, etc. Usually, a spare laryngoscope is not available and, even if so, optimal conditions for intubation are soon lost. We have used a pencil torch in such a situation and successfully intubated the trachea (fig. 1). We have trained our residents in this technique over the past 25 yr, and it has been used by them on many occasions. We urge that this measure be a part of the intubation technique in a training program for residents.

YUKIO KUBOTA, M.D.
Chief

YOSHIRO TOYODA, M.D.
Associate Chief

HIROSHI KUBOTA, M.D.
Staff

*Department of Anesthesia
Osaka Kohseinenkin Hospital
4-2-78, Fukushima
Fukushima-Ku, Osaka, Japan 553*

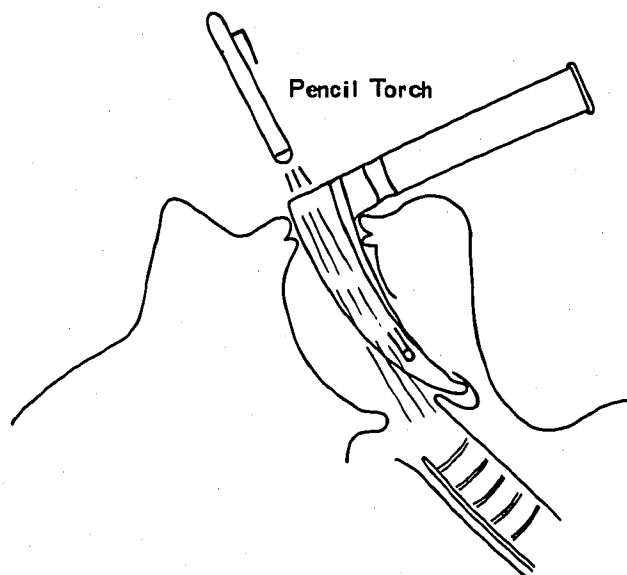


FIG. 1. An assistant holds the pencil torch and direct illumination of the vocal cords is easily accomplished.

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Nitrous Oxide and Endotracheal Tube Cuff Leaks

To the Editor:—It is well known that nitrous oxide will diffuse into and enlarge an endotracheal tube cuff.¹ Anesthesiologists are aware of the need to remove volume from the cuff as the gas within it equilibrates with the nitrous oxide tension in the blood to prevent excessive cuff pressure or volume. In a patient whose trachea remains intubated postoperatively, the reverse occurs, *i.e.*, nitrous oxide diffuses out of the cuff.

On several occasions, I have been called to the intensive care unit because of a "cuff leak," approximately 1-2 h after a patient has been transferred from the operating room. Typically the complaint is, "There must be a slow leak—we've had to keep adding air to the cuff." Injection of a few ml of air has resulted in a good seal, suggesting that the leak arose because nitrous oxide in the cuff had diffused back out. In critically ill

patients or those requiring positive end expiratory pressure, even small leaks can be dangerous.

The simple solution is for the anesthesiologist to empty the cuff at the end of the case and replace the gas with room air.

BRIAN L. PARTRIDGE, M.D., D.PHIL.
Assistant Professor of Anesthesiology
Department of Anesthesiology

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University of California Medical Center
225 Dickinson Street
San Diego, California 92103

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Is Metocurine Better?

To the Editor:—The finding by Stirt *et al.*¹ that pretreatment of patients with a small "defasciculating" dose of metocurine could prevent increases in ICP induced by succinylcholine (Sch) is of particular interest to anesthesiologists who frequently care for patients with compromised intracranial compliance. However, in many centers, the use of metocurine is declining, and some hospitals are removing it from their formularies, thus decreasing its availability for use. Unfortunately, the efficacy of the various non-depolarizing muscle relaxants varies with respect to their ability to prevent some of the undesirable effects of succinylcholine,²⁻⁴ so that this finding with metocurine cannot be extended to other agents without specific testing.

Another issue, as recognized by Stirt *et al.*, is the fact that airway manipulation, intubation, etc., can all raise ICP, and attention must be given to these other sources of intracranial hypertension. With this in mind, pancuronium, or other non-depolarizing relaxants, may still be preferred over the metocurine-succinylcholine combination. In work reported by McLeskey *et al.*,⁵ four patients given 3 mg of d-tubocurarine for defasciculation followed by succinylcholine had either no change or a decrease in ICP 1 min after succinylcholine administration, but two of the four had increases in ICP greater than 9 mmHg during tracheal intubation. In contrast, none of the eight patients given pancuronium (0.1 mg/kg) had increases in ICP of more than 9 mmHg during intubation (one had an increase to 8 mmHg). These data suggest that pancuronium may help mitigate ICP changes during intubation, which succinylcholine, even after defasciculation, may not do. The fact that pancuronium decreases the MAC of halothane⁶ and, possibly, of other agents may help account for its

effect during intubation. However, the multiple, closely spaced manipulations carried out by McLeskey *et al.* make this suggestion speculative rather than definitive, and indicate the need for further work.

MARIE L. YOUNG, M.D.
DAVID L. SMITH, M.D., PH.D.
ROGER J. BAGSHAW, M.D.
MARC J. BLOOM, M.D., PH.D.
Division of Neurosurgical Anesthesia
Department of Anesthesia
Hospital of the University of Pennsylvania
Philadelphia, Pennsylvania 19104

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In Reply:—We thank Dr. Young and her group for their interest in our paper,¹ and would offer two comments.

First, it is indeed true that the availability of metocurine, like that of gallamine, is decreasing, lessening its use even where it might be indicated. Thus, the anes-