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Percutaneous Transtracheal High-frequency Jet Ventilation as an Aid to Fiberoptic Intubation

To the Editor:—Boucek *et al.* have described an innovative technique using transtracheal jet ventilation during difficult intubations.¹ While this method may be useful in unusual circumstances, it requires special equipment, is unfamiliar to many anesthesiologists, and is not without risk. Furthermore, simpler alternatives are available.

We disagree that one must necessarily ventilate the anesthetized patient during fiberoptic laryngoscopy. Spontaneous inhalation of anesthetic agents, oxygen, and even nebulized lidocaine can be easily achieved by connecting the breathing circuit to a nasopharyngeal tube or a "dual purpose connector."² Transparent adhesive dressing will provide a seal where needed. This technique, preceded by an inhalation induction, is applicable to patients with difficult airways except in the presence of: 1) decreased intracranial compliance, where hyperventilation is most reliably achieved by conventional positive pressure ventilation, and 2) a "full stomach," where jet ventilation offers no demonstrated advantage, and awake intubation is indicated.

The safety and efficacy of topical anesthesia for awake fiberoptic intubation should not be downplayed. Stating that "potentially toxic doses of local anesthetic may be necessary," the authors have quoted a paper which, in fact, demonstrated low peak plasma concentrations of lidocaine (mean $0.6 \pm 0.3 \mu\text{g/ml}$) despite the high administered doses (mean $5.3 \pm 2.1 \text{ mg/kg}$).³

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In Reply:—We appreciate the comments of Drs. Todesco and Williams. We recognize that multiple strategies are possible in dealing with patients who have difficult airways. Our technique does require special equipment—a fiberoptic laryngoscope and a HFJV—both now commonly found in modern operating suites.

We have found that the simple, familiar, and, therefore, safer adjuncts to fiberoptic laryngoscopy allow for successful intubation under most circumstances. Therefore, the use of percutaneous transtracheal jet ventilation should be reserved for extraordinary situations.

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In our report, we clearly mention the possibility of anesthesia induction *via* mask followed by fiberoptic intubation; this technique is frequently inappropriate when ventilation *via* mask is anticipated to be difficult, as in case 2 of our report, or when intracranial pressure may be elevated, as in our case 3. Although there is