

during spontaneous ventilation following induction of general anaesthesia.⁴ All patients were successfully intubated but the mean time from induction to intubation was 13.2 mins (range 5–28 mins) and in 18 patients arterial oxygen saturation decreased to <90%.

From a teaching perspective, I agree that clinical exposure to the technique can be vastly increased by its use in anaesthetized patients presenting for elective surgery. Experience with fiberoptic intubation in this setting can only be beneficial, although increased difficulty may be encountered in patients with abnormal airway anatomy. In awake fiberoptic intubation, the introduction of the bronchoscope and subsequent intubation is not a difficult skill to master. Achieving adequate regional anaesthesia of the airway, however, can be difficult and requires practice.

Fiberoptic intubation in the unconscious patient is an accepted strategy in the management of the unsuspected difficult laryngoscopy, but the emphasis should be on careful airway examination to predict possible difficult intubation, and awake intubation when difficulty is anticipated.⁶ Thorough examination of the airway using multiple parameters such as tongue vs pharyngeal size, atlanto-occipital extension, the anterior mandibular space, and anterior mandibular movement can be effective in predicting difficult intubation.^{5–8} The risk of a failed intubation must be carefully considered when the use of succinylcholine or a longer-acting non-depolarizing muscle relaxant is contemplated.

Apnoea does indeed impose a time limit on intubation. In the six studies quoted by Cole *et al.*, the time required to achieve fiberoptic intubation was "20–40 seconds" longer than that required for intubation by direct laryngoscopy. Four of these studies, however, excluded patients predicted to be a difficult intubation,^{1–3,9} and the remaining two did not comment specifically on the airway anatomy.^{10,11} Oxygen desaturation of haemoglobin has been reported during fiberoptic intubation in the apnoeic as well as the spontaneously ventilating patient under general anaesthesia.^{4,12} Pharyngeal insufflation of oxygen has been shown to prevent arterial desaturation for as long as ten minutes of apnoea in anaesthetized paralyzed ASA I or II patients without symptomatic pulmonary disease,¹³ but to be effective this technique requires a patent airway.

In conclusion, fiberoptic intubation under general anaesthesia can be used as an alternative intubation technique in patients with normal airway anatomy and can be a valuable teaching modality. While not diminishing the importance of skill in fiberoptic intubation of patients with normal airways under general anaesthesia, skill in local airway anaesthesia and awake fiberoptic intubation is essential and must not be de-emphasized.

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Adaptation of ICU ventilator to deliver isoflurane

To the Editor:

Inhaled anaesthetic agents are recognized as a useful therapy for status asthmaticus refractory to standard medical management.^{1,2} Isoflurane is the agent of choice because of its limited biotransformation.^{2,3} We have encountered problems delivering this therapy at our hospital because it requires the transfer of critically ill patients from the ICU to the operating room. Certain ICU ventilators have the capability of delivering inhaled agents,^{1–3} but we do not have access to these ventilators in our ICU. Therefore, we have developed a system which can be attached to an ICU ventilator to allow the delivery of isoflurane in an ICU setting.

The system is constructed as follows: an oxygen tube connects the flow-meter of an air-oxygen mixer (Sechrist 3500H2) to a #5.0 mm ETT connector, which is attached to a 15 mm intubation adapter and then to a six inch disposable large bore tube which is attached to the inlet of the vaporizer (Ohio Model 100F). A two foot ventilator tube is placed on the outlet of the vaporizer and attached to the outlet of the ventilator humidifier via a standard

aerosol "T". To scavenge waste gases, the 19 mm end of a 22 mm/19 mm OD Bird mask adapter is placed inside (shaved slightly to fit) the opening of the exhalation port of the ventilator. The distance to the active scavenging reservoir is bridged using a tubing from an anaesthesia circuit. Suction in the active scavenging reservoir is controlled with an on/off tap attached to high pressure vacuum tubing, and regulated with a hose clamp attached to a short length of patient suction tubing situated between the high pressure tubing and the small bore nipple.

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Patients prefer scented face masks

To the Editor:

Preoxygenation (nitrogen washout), prior to induction of anaesthesia is becoming routine in many hospitals, and is no longer used only before rapid-sequence induction. Use of scented oils painted onto rubber masks facilitates inhalational induction in children,^{1,2} but little attention has been given to the adult population. Clear PVC anaesthetic masks, some scented, are available as an alternative to the traditional rubber masks.

One hundred patients (47 men and 53 women) aged 17-90 years (mean 48.5 years \pm 1.98 SEM), ASA class I, II and III were randomized for non-emergency surgery to breathe oxygen for a few minutes before induction of anaesthesia through either an Ohmeda rubber face mask, or a King Systems "Fresh Scent" (mint scented). Ninety-one (40 male and 51 female) patients preferred the clear "Fresh Scent" mask ($P < 0.001$). Two patients (both men) preferred the black rubber mask and seven (five male and two female) patients had no preference. Many patients volunteered that they found the black

mask frightening. Use of the preferred mask may reduce anxiety and contribute to a more relaxed, cooperative patient facilitating smoother anaesthetic induction. The clear mask has additional advantages. The design permits simple adjustment of the cushion to ensure an airtight fit. The crown is transparent allowing monitoring of respiration and early detection of regurgitation which is especially beneficial in anaesthesia for emergency surgery. The single use mask minimises the risk of cross infection between patients or contamination of patients with potentially irritant cleaning fluids. An initial drawback may appear to be the cost of a disposable mask. However, the price of the disposable mask is approximately \$2.75-3.00 (US) compared with \$55-60 (US) for a reusable mask. Additional costs are also incurred in the cleaning and sterilization of reusable masks.

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Erratum

Archer DB, Tang TKK. The choice of anaesthetic for carotid endarterectomy: does it matter? (Editorial). *Can J Anaesth* 1995; 42: 566-70.

Please note that under the heading "Treatment" - at the top of the Table - the designations "Yes" and "No" were transposed (also in the French). The correct version should read as follows:

TABLE Risk of cardiac mortality*

	Treatment		Total
	No	Yes	
Cardiac mortality			
- No	324	318	642
- Yes	7	10	17
Total-	331	328	659

* $\chi^2 = 0.26$, $P = 0.610$.