The results of the study demonstrate that cerebral oxygenation varies directly with $F_{IO2}$ in anaesthetized patients with severe carotid artery stenosis. The observed increase in rSO$_2$ was similar to that reported in anaesthetized ventilated patients without vascular disease$^6$ and in anaesthetized patients$^5$ after the placement of a carotid cross-clamp. Contrary to previous reports,$^2$ we did not observe a relationship in the degree of carotid artery stenosis and rSO$_2$ between hemispheres. Recent evidence suggests that bolus-dose phenylephrine is associated with a measureable decrease in rSO$_2$ of 7–8 min duration.$^6$ Here there was no difference in phenylephrine dosing between the groups. The effect of phenylephrine by infusion has yet to be investigated. Although the clinical significance of an 8% increase in rSO$_2$ remains to be determined, the results provide a rationale to increase cross-clamp. Contrary to previous reports,$^2$ we did not observe a relationship in the degree of carotid artery stenosis and rSO$_2$ between hemispheres. Recent evidence suggests that bolus-dose phenylephrine is associated with a measureable decrease in rSO$_2$ of 7–8 min duration.$^6$ Here there was no difference in phenylephrine dosing between the groups. The effect of phenylephrine by infusion has yet to be investigated. Although the clinical significance of an 8% increase in rSO$_2$ remains to be determined, the results provide a rationale to increase cross-clamp.

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Combined technique using videolaryngoscopy and Bonfils for a difficult airway intubation

Editor—A difficult tracheal intubation can sometimes still be a problem, even if one has taken all precautions such as the evaluation of premetrics of a difficult airway, difficult airway trolley, and help from additional qualified personnel. The BURP manoeuvre$^1$ is usually the first technique applied when laryngoscopy reveals a Cormack and Lehane grade III or IV, followed by the use of a number of adjuncts (gum elastic bougie, stylet) or different approaches of the airway (e.g. fibroptic intubation, supraglottic airway, videolaryngoscopy). Nevertheless, even when all the above techniques have been applied properly, tracheal intubation still can be very challenging in the rare event that no part of the glottic entrance, nor the epiglottis can be seen.

We report our experience with a 45-yr-old woman (165 cm, 128 kg, BMI 48 kg m$^{-2}$, ASA class II, Mallampati grade IV, thyromental distance 51 mm, mouth opening 41 mm, short restricted neck) who presented for bariatric surgery (sleeve resection) under general anaesthesia. She had a past medical history of hypertension and diabetes mellitus and during a previous operation for removal of the right ovary (in another hospital), she had a prolonged and very difficult intubation, which eventually was successful using the LMA-Fastrach$^6$ as a conduit for tracheal intubation.
Fibrescope. Once the Bonfils intubation without problems. Rocuronium 0.1 mg kg\(^{-1}\) was administered. Before intubation, the lungs were manually inflated using face mask ventilation propofol 2.5 mg kg\(^{-1}\). We easily intubated the trachea by using a combined technique, that is, the videolaryngoscope, Karl Storz, Tuttlingen, Germany) for almost 3 yr as our standard intubation technique, we also used it in this particular patient, revealing a Cormack–Lehane grade III, whereas the classic laryngoscope (C-MAC videolaryngoscope, Karl Storz, Tuttlingen, Germany) was repositioned such that both views were brought together on one monitor which is normally used by the surgeons (Fig. 1), so that the intubation procedure could be seen by the whole team.

This combined technique can be used for difficult tracheal intubation and can be one of many alternative routes to secure a safe airway for which anesthesiologists should be trained in. The videolaryngoscope can also be helpful in presenting a better view for rigid bronchoscopy (respiratory physicians) or for ENT surgeons, who wish to inspect the oropharynx and larynx.

**Fig 1** The combined use of videolaryngoscopy (left), presenting the best possible view of the larynx and epiglottis (Cormack Lehane grade III) and Bonfils\(^{-1}\) intubating fibrescope using a railroading technique for intubation of a difficult airway, showing the tracheal rings (right).

After discussing the anaesthetic options, the team and the patient agreed to proceed with general anaesthesia. After preoxygenation for 4 min, i.v. fentanyl 5 \(\mu\)g kg\(^{-1}\) and propofol 2.5 mg kg\(^{-1}\) i.v. was administered. Before intubation, the lungs were manually inflated using face mask ventilation without problems. Rocuronium 0.1 mg kg\(^{-1}\) was given i.v. and mask ventilation continued until the conditions were suitable for intubation of the trachea. This induction is in accordance with the routine practice in our hospital for bariatric surgical patients with the presence of the difficult airway trolley in the room. As we have been using the videolaryngoscope (C-MAC\(^{\circledR}\) videolaryngoscope, Karl Storz, Tuttlingen, Germany) for almost 3 yr as our standard intubation technique, we also used it in this particular patient, revealing a Cormack–Lehane grade III, whereas the classic laryngoscope showed a grade IV. We easily intubated the trachea by using a combined technique, that is, the videolaryngoscope used to achieve the best possible view and space of the laryngeal inlet for the insertion and manoeuvring of the Bonfils\(^{-1}\) (Karl Storz, Tuttlingen, Germany), which was preloaded with the tracheal tube. There is enough room next to the C-MAC\(^{\circledR}\) to allow easy insertion of the Bonfils\(^{-1}\) intubating fibrescope.\(^{2,3}\) Once the Bonfils\(^{-1}\) had entered the trachea, the tracheal tube was placed in the correct position. We organized it in such a fashion that both views were brought together on one monitor which normally is used by the surgeons (Fig. 1), so that the intubation procedure could be seen by the whole team.

This combined technique can be used for difficult tracheal intubation and can be one of many alternative routes to secure a safe airway for which anesthesiologists should be trained in. The videolaryngoscope can also be helpful in presenting a better view for rigid bronchoscopy (respiratory physicians) or for ENT surgeons, who wish to inspect the oropharynx and larynx.

**Declaration of interest**

None declared.

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**Therapeutic hypothermia: heat transfer from warmed tracheal tubes to oesophageal temperature probes poses risk of life-threatening overcooling**

Editor—The induction and maintenance of therapeutic hypothermia is known to be associated with temperature-dependent side-effects, including pneumonia, metabolic and electrolyte disorders, seizures, and arrhythmias.\(^{1}\) When core temperature decreases below 30 °C, severe bradyarrhythmias can lead to haemodynamic instability and cardiac arrest.

We report on two cases of life-threatening accidental overcooling and highlight an important safety issue associated with the induction and maintenance of therapeutic hypothermia using automated devices controlled by a single temperature probe. In particular, oesophageal temperature probes placed in the proximal half of the oesophagus can grossly overestimate ventilated patients’ actual temperature, causing automated cooling devices to overcool patients well below set temperature targets.

Two sedated and ventilated adults were being treated with therapeutic hypothermia for refractory intracranial hypertension after severe traumatic brain injury. Automated cooling blankets (Blanketroll II\(^{\circledR}\), Cincinnati Sub Zero, OH, USA) were set at target oesophageal temperatures of 35 °C and 33 °C, respectively. Both patients progressively developed severe bradycardia (<35 beats min\(^{-1}\)) refractory to i.v. atropine, with non-specific ECG changes and haemodynamic instability. Despite temperature readings at the oesophagus being close to the set temperature targets, actual axillary temperatures were found to be 27 and 28 °C, respectively. Advancing the probe towards the distal third of the oesophagus caused the core temperature measured at the oesophagus to converge with the temperature measured at the axilla.