Difficulty in advancing a tracheal tube over a fibreoptic bronchoscope: incidence, causes and solutions

Editor—Asai and Shingu should be congratulated on their thorough and informative review of the vexing problem of how best to advance a tracheal tube (TT) over a fibrescope that has been correctly positioned in the trachea. Indeed, junior endoscopists are often frustrated by their inability to perform what they wrongly believe to be the easy part of the fibreoptic intubation sequence: railroading the tube—the nuances of which can be as subtle and exacting as any other part of the procedure. We have used three approaches not mentioned in the article to deal with problems at this point in the intubation process.

First, increasing the size of the target area the TT must negotiate (i.e. dilating the laryngeal introitus and supra-glottis). This can be done by asking the patient to take a deep breath when the tube is advanced or similarly, advancing the tube on inspiration. Patient compliance is assured by using minimal sedation and topical anaesthesia. Equally, in spontaneously breathing anaesthetized patients, tube advancement should be synchronized to the inspiratory phase.

Second, personal experience is that it is more straightforward to advance a TT when an awake patient is sitting upright than when recumbent. This may relate to optimal positioning of the head and neck and is the position mandated by many patients who have jeopardized airways.

Lastly, although Asai and Shingu refer to flexing the patient’s neck, full optimization of the airway may be facilitated by asking a sitting patient to look upwards; they automatically adopt a posture to ‘sniff the morning air’, which, again, seems to minimize hold-up of the TT.

So, as Asai and Shingu eloquently point out, there are many evidenced-based manoeuvres and pieces of equipment that are used to advance TTs over fibrescopes, but we must never forget that the patient can be of vital help too.

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Methicillin-resistant Staphylococcus aureus in the critically ill

Editor—We read with great interest the review article on MRSA in the critically ill, in which the authors stressed the high risk of infection in intensive care patients. Recently, we presented the case of a patient who died in our ITU, at our hospital’s grand round. We gave his cause of death on the death certificate as methicillin-resistant Staphylococcus aureus (MRSA) septicaemia secondary to MRSA pneumonia. The 47-yr-old patient had a previous history of controlled asthma. He had had no hospital treatment in the past. He needed level 3 critical care treatment after acute deterioration in his asthma control attributable to a presumed viral infection, and was transferred to our unit. His admission MRSA screen was negative. Subsequently he developed septic shock and multi-organ failure. A chest x-ray showed new infiltrates consistent with hospital-acquired pneumonia and sputum and blood cultures grew MRSA. He died 16 days after admission despite treatment with vancomycin, fusidic acid and rifampicin. Post-mortem examination showed bilateral multiple small lung abscesses consistent with staphylococcal infection. MRSA was grown from these.

Your review article has highlighted the issue of MRSA as a primary cause of death in critical care that is being increasingly reported and has helped us in documenting our case. We have also been able to stress upon our hospital colleagues that intensive care patients have a combination of risk factors that makes them especially prone to nosocomial infection and the Critical Care Unit in any hospital will continue to have the highest infection rates, particularly with MRSA (Fig. 1). We also believe that scrupulous
Dexmedetomidine for resection of a large phaeochromocytoma with invasion into the inferior vena cava

Editor—Dexmedetomidine is increasingly used in patients on mechanical ventilation in intensive care units.1 Perioperative use of dexmedetomidine provides a steady haemodynamic course and blunts fluctuations at stressful moments like intubation and extubation.2 In phaeochromocytoma surgery, dexmedetomidine could be a useful anaesthetic adjunct in minimizing episodes of abrupt arterial hypertension expected during manipulation of the tumour. We report use of dexmedetomidine in a patient with a large phaeochromocytoma with invasion into the inferior vena cava (IVC), in whom adrenalectomy with excision of the invaded part of IVC was planned. The patient received a 2-week course of phenoxybenzamine and propranolol before surgery. On arrival in the operating theatre, arterial pressure through an intra-arterial catheter in the left radial artery measured 120/65 mm Hg. A loading dose of dexmedetomidine 2 mg kg⁻¹ was infused over 10 min followed by an infusion at 0.7 mg kg⁻¹ h⁻¹. Anaesthesia was induced with fentanyl 100 mg, thiopentone 250 mg, rocuronium 50 mg and esmolol 30 mg. The highest arterial pressure (AP) during intubation was 145/80 mm Hg. Intraoperative monitoring included ECG, AP, CVP, saturation, end-tidal carbon dioxide and volatile agent, airway pressure and temperature. Anaesthesia was maintained with isoflurane 0.6% in oxygen and nitrous oxide, remifentanil at 0.1 mg kg⁻¹ min⁻¹ and cisatracurium. Labetalol 20 mg had been administered before direct tumour manipulation. During direct tumour manipulation, the remifentanil was increased to 0.2–0.3 mg kg⁻¹ min⁻¹. Sodium nitroprusside was administered at a low dose between 0.2 and 0.7 mg kg⁻¹ min⁻¹. Two doses of esmolol 20 mg were given to control spurious increase in AP. The AP during dissection around the tumour ranged from 80/40 to 145/90 mm Hg. Upon clamping of IVC, the remifentanil, nitroprusside and dexmedetomidine infusions were stopped. During the IVC clamping period of 25 min, the AP was stabilized with phenylephrine and epinephrine (total dose of 1 mg and 340 mg, respectively), and ranged from 70/35 mm Hg to 120/65 mm Hg. Upon release of the IVC clamp, the AP dropped to 80/40 mm Hg, which quickly returned to above 110/60 mm Hg with fluid and dopamine infusion. The dopamine infusion was stopped before the end of surgery (total dose 5.81 mg). The surgery lasted 4 h 21 min and the patient was extubated awake uneventfully 15 min later. A morphine patient-controlled anaesthesia was prescribed for postoperative pain relief. The patient made an uneventful recovery.

In resection of a large phaeochromocytoma with IVC invasion, haemodynamic instability especially with severe episodic hypertension from surgical stimuli and tumour manipulation are expected. Preoperative α-blockade, intraoperative vasodilators and increasing anaesthetic depth are common measures to smoothen out the haemodynamic course and prevent hypertensive crises.3 Remifentanil is effective in blunting the sympathetic response to noxious stimuli and has been used in phaeochromocytoma excision to control intraoperative haemodynamic instability,4 but significant hypotension and bradycardia, and a large increase in plasma catecholamine levels and marked hypertension during manipulation have been reported.5 Dexmedetomidine, a highly selective α₂-adrenoceptor agonist, has sedative and analgesic properties.6 It attenuates sympathoadrenal responses to tracheal intubation and surgical stimuli and has a significant anaesthetic-sparing effect when used intraoperatively.7 8 In order to blunt the intubation stress, we administered a high loading dose of dexmedetomidine of 2 mg kg⁻¹ before induction and the patient remained haemodynamically stable during intubation. After the loading dose, the infusion was maintained at 0.7 mg kg⁻¹ h⁻¹ until clamping of the IVC. In the remaining surgery, haemodynamic stability was maintained with inotropic support, which was stopped at the end of surgery.

In summary, we describe the management of a patient for excision of a large phaeochromocytoma with invasion into a major vessel, in whom dexmedetomidine was found a useful anaesthetic adjunct to maintain steady haemodynamics and to prevent abrupt hypertensive crises.

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Unrecognized malfunction in computerized patient simulators

Editor—Life-like computerized patient simulators are now widely used in clinical training. In addition to their established role in crisis resource management education,1 2 simulators are also being used to teach pre-clinical physiology3 and to evaluate clinical performance.4 The widespread adoption of simulation-based crisis resource management training is a direct analogy to similar training in aviation and has been driven by the need to provide education that should reduce both medical error and risks to patients.5 This growth in medical simulation has been

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