

other major trials around the world, the Royal College of Surgeons of England (RCS) has announced that SNB is expected to become the new standard of care for breast cancer [6]. The RCS introduced the 'new start' programme in October 2004 to train all UK breast surgeons in SNB. Anaesthetists should be aware of the problems associated with the use of isosulfan blue and pulse oximetry.

N. A. Wisely

A. Zeiton

Wythenshawe Hospital

Manchester M23 9LT, UK

E-mail: nickwisely@yahoo.co.uk

References

- Hoskin RW, Granger R. Intraoperative decrease in pulse oximeter readings following injection of isosulfan blue. *Canadian Journal of Anaesthesia* 2001; **48**: 38–40.
- Vokach-Brodsky L, Jeffrey SS, Lemmens HJ, Brock-Utne JG. Isosulfan blue affects pulse oximetry. *Anesthesiology* 2000; **93**: 1002–3.
- Heinle E, Burdumy T, Recabaren J. Factitious oxygen desaturation after isosulfan blue injection. *American Surgery* 2003; **69**: 899–901.
- El-Tamer M, Komenaka IK, Curry S, Troxel AB, Ditkoff BA, Schnabel FR. Pulse oximeter changes with sentinel lymph node biopsy in breast cancer. *Archives of Surgery* 2003; **138**: 1257–60.
- Montgomery LL, Thorne AC, Van Zee KJ, et al. Isosulfan blue dye reactions during sentinel lymph node mapping for breast cancer. *Anesthesia and Analgesia* 2002; **95**: 385–8.
- The Royal College of Surgeons. New training in breast cancer treatment [WWW document]. http://www.rcseng.ac.uk/about_the_college/pdf/new_training_breast_cancer_100pdf [accessed 8 January 2005].

Emergency tracheal intubation using a gum elastic bougie through a laryngeal mask airway

Emergency airway management often occurs out of hours when only less experienced staff are available and



Figure 5 Lateral neck X-ray postintubation showing the severity of the fixed flexion deformity.

immediate access to equipment may be delayed. We wish to report such a case. A 74-year-old female with severe rheumatoid arthritis and acute left sided lobar pneumonia was referred to us for respiratory support. Airway assessment revealed a severe fixed flexion deformity of her neck, a receding mandible with a thyromental distance of 2 cm, an interincisor distance of 3 cm, and partial dentition. She was transferred to the intensive care unit (ICU) for awake fibreoptic intubation. However, as she was wheeled through the doors of the unit she suffered an asystolic cardiorespiratory arrest. Manual ventilation with 100% inspired oxygen via a facemask and oropharyngeal airway together with atropine 3 mg i.v. restored her cardiac output and heart rate. She remained unresponsive, however.

Direct laryngoscopy proved difficult in view of her anatomical abnormality and she was found to be Cormack and Lehane grade 4 [1]. A size 3 classic laryngeal mask airway (LMATM, Intavent Orthofix, Maidenhead, UK) was inserted and ventilation improved mar-

ginally. As the fibreoptic laryngoscope was not yet available, a gum elastic bougie was passed blindly through the laryngeal mask airway and into the trachea, as confirmed by resistance to advancement at approximately 30 cm. The laryngeal mask airway was removed and a size 7.0 mm tracheal tube was railroaded over the bougie and controlled ventilation established. A lateral neck X-ray taken following intubation revealed the severity of her disease (Fig. 5). In view of the likelihood of prolonged ventilation and concerns over the consequences of accidental extubation, an early tracheostomy was performed by the ENT surgeons, with some technical difficulty, on day 2.

This case illustrates several points regarding difficult airway management. Firstly, there was a lack of appreciation of potential airway difficulties by non-anaesthetic staff. Clearly, this patient should have been referred before she was *in extremis* when a more controlled approach to airway management could have been employed. Second, difficult

airway equipment including fiberoptic scope and airway adjuncts such as intubating laryngeal mask airways should be immediately available in ICU at all times. This is particularly important as the 'awaken patient' scenario proposed for 'can't intubate, can't ventilate (adequately)' elective theatre patients [2] is often not an option for patients referred to ICU. Intubation of the difficult elective airway by blindly passing a gum elastic bougie into the trachea via a regular laryngeal mask airway has been previously described [3]. Allison reported a success rate of 88% in elective cases [4] but subsequent studies have reported much lower success rates of 20–28% [5, 6]. As a result, it has been concluded that this technique is unreliable and not recommended as part of the failed intubation drill. Variable success rates for blind intubation 30–90% passing a tracheal tube via the classic laryngeal mask airway have also been reported [7–9].

It has been suggested that insertion of the intubating laryngeal mask airway may be easier than conventional laryngeal mask airway in patients with a fixed flexion deformity [10, 11]. The Difficult Airway Society guidelines suggest that fiberoptic bronchoscopy via an intubating laryngeal mask airway and railroading of the tracheal tube followed by cricothyrotomy if unsuccessful, might have been the option of choice for our patient [2]. This is a technique that demands practice in elective cases prior to attempts in the emergency situation. Our decision to attempt blind bougie passage resulted from the gravity of the situation and the lack of other immediately available equipment. We recommend that, as the technique is simple and quick, it could still be considered in such cases while other emergency equipment is being prepared. However, it should not delay attempts at other techniques with potentially a higher success rate. The need for rehearsal of such difficult airway drills and the need to educate our non-anaesthetic colleagues cannot be over-emphasised.

J. A. C. Murdoch

Kingston General Hospital
Kingston ON K7L 3Y7, Canada
E-mail: murdochj@khg.kari.net

References

- 1 Cormack RS, Lehane J. Difficult tracheal intubation in obstetrics. *Anaesthesia* 1984; **39**: 1105–11.
- 2 Henderson JJ, Popat MT, Latto IP, Pearce AC. Difficult Airway Society guidelines for management of the unanticipated difficult intubation. *Anaesthesia* 2004; **59**: 675–94.
- 3 Chadd GD, Ackers JW, Bailey PM. Difficult intubation aided by the laryngeal mask airway. *Anaesthesia* 1989; **44**: 1015.
- 4 Allison A, McCrory J. Tracheal placement of a gum elastic bougie using the laryngeal mask airways. *Anaesthesia* 1990; **45**: 419–20.
- 5 Gabbott DA, Sasada MP. Tracheal intubation through the laryngeal mask using a gum elastic bougie in the presence of cricoid pressure and manual in line stabilisation of the neck. *Anaesthesia* 1996; **51**: 389–90.
- 6 Ahmed AB, Nathanson MH, Gajraj NM. Tracheal intubation through the laryngeal mask airway using a gum elastic bougie: the effect of head position. *Journal of Clinical Anesthesia* 2001; **13**: 427–9.
- 7 Lim SL, Tay DH, Thomas E. A comparison of three types of tracheal tube for use in laryngeal mask assisted blind orotracheal intubation. *Anaesthesia* 1994; **49**: 255–7.
- 8 Asai T. Blind tracheal intubation through the laryngeal mask. *Canadian Journal of Anaesthesia* 1996; **43**: 1275.
- 9 Heath ML, Allagain J. Intubation through the laryngeal mask. A technique for unexpected difficult intubation. *Anaesthesia* 1991; **46**: 545–8.
- 10 Ishimura H, Minami K, Sata T, Shigematsu A, Kadoya T. Impossible insertion of the laryngeal mask airway and oropharyngeal axes. *Anesthesiology* 1995; **83**: 867–9.
- 11 Asai T, Shingu K. Tracheal intubation through the intubating laryngeal mask in a patient with a fixed flexed neck and deviated larynx. *Anaesthesia* 1998; **53**: 1199–201.

Bilateral otorrhagia during emergence from anaesthesia

I wish to report a case of spontaneous bleeding from the ears during recovery

from anaesthesia. A 76-year-old woman was scheduled to undergo a right hip hemiarthroplasty. She had Parkinson's disease, rheumatoid arthritis and hypothyroidism. Assessment of her airway revealed a receding mandible; the clinical examination was otherwise unremarkable. She received general anaesthesia supplemented with a '3 in 1' femoral nerve block. Anaesthesia was induced with propofol and fentanyl and maintained with nitrous oxide 66% in oxygen and isoflurane. A laryngeal mask airway was inserted and her lungs were mechanically ventilated. During the procedure she was haemodynamically stable. On completion of surgery the neuromuscular block was reversed.

At the time of laryngeal mask airway removal, fresh blood was noted to be coming from both ears. The bleeding did not stop with compression. Following removal of the laryngeal mask airway her respiratory efforts were inadequate to maintain oxygenation and vigorous bag-valve-mask ventilation failed to improve the situation. The difficulty in maintaining the airway was overcome by insertion of a Guedel airway, together with two-handed bag-valve-mask ventilation with help from the assistant. However, the bleeding from both ears increased with the bag-valve-mask ventilation. At this time her blood pressure rose to 210/120 mmHg and heart rate to 90 bpm. She remained unconscious and unresponsive. Because of concerns about her ability to maintain an adequate airway, her trachea was intubated and lungs mechanically ventilated. An intracranial bleed was considered as a possible cause of her obtunded state and the bleeding from her ears and the rise in arterial pressure manifestations of the bleed. Both pupils were small and equal size, although the reaction to light was sluggish. Other causes of unconsciousness and delayed recovery were considered including hypercarbia, hyperuraemia and electrolyte derangement. Her arterial blood gases and biochemistry were normal. After 30 min of ventilation, she started to breathe spontaneously and opened her eyes. A neurological examination was normal with no localizing or lateralizing signs, and she was extubated.