barotrauma. Modern anesthetic ventilators such as the Datex-Ohmeda S/5™ ADU with tidal volume compensation adjusts the volume delivered by the ventilator bellow to ensure that the sum of the volume delivered from the ventilator and from the fresh gas flow equals the preset tidal volume.[2]

During each inspiratory phase of respiratory cycle (2.5 sec), the amount of tidal volume delivered was equal to fresh gas flow/sec (13000 mL·60 sec^{-1}) × 2.5 sec = 541 mL. This amount exceeded the preset tidal volume of 500 mL. Therefore, there was no additional delivery required from the ventilator bellows to achieve the preset tidal volume.

Anesthesiologists should be alerted to this phenomenon of ventilator bellow standstill during emergence when the inspiratory volume delivered using a high fresh gas flow is greater than or equal to the preset tidal volume on volume control ventilation.

David T. Wong MD
Alyssa Q. Li MD
Toronto Western Hospital, Toronto, Canada
E-mail: david.wong@uhn.on.ca

References

1 *Andrews J.* Inhaled anesthetic delivery systems. *In*: Miller RD (Ed.). Anesthesia, 5th ed. New York: Churchill Livingstone Inc.; 2000: 195–8.
2 S/5™ Anesthesia Delivery Unit User's Reference Manual 2003. Version March 24, 2003.

Avoiding exacerbation of the skills exodus

To the Editor:
Dr. Ben Ammar[1] describes the conflicting needs of individuals *vs* nations in a world of vast economic and political disparities. The core value of western democracy is protection of individual rights, including security of person, economic opportunity, and choice in daily and political life. It requires the just and timely rule of law transparently administered.[2] Progress is driven by rewarding the competent with a greater share of society's fruits. Unsurprisingly, talented individuals seek maximal opportunities for security, full exercise of skills, and opportunities for their children.

Developing nations, on the other hand, need reinvestment of economic, including human, capital but are less attractive economically and often less secure. They need a strategy for retaining individuals who can compete successfully for places in the developed world. Coercion (force) is not acceptable to us; we call its victims refugees. Persuasion, using national pride, contractual obligations, tribal/religious identification, or xenophobia, has mixed results, often because limited opportunity, human rights or security supervene.

The desire of successful individuals to emigrate, like the developmental failure of some resource rich countries (e.g., Zimbabwe and Zaire), has political roots. No social or economic policy will effect meaningful change without fixing the base cause. However, can Canadians avoid exacerbating the problem?

Firstly, our foreign policy should promote development of just and law abiding societies with transparent economies. Secondly, Canadian health manpower policy should not rely on migration from developing nations to supply our needs, as is currently the case. Strangely, we deny our own children appropriate opportunities to become (expensively) educated professionals while promulgating, as one response to resulting shortages, the attraction and licensing of foreign graduates (whose training we do not have to pay for). This is construed to be a form of economic colonialism. Foreign trained but unlicensed physicians already living in Canada are a resource that should not be wasted, but we should still be training enough of our own. Thirdly, on an individual level, Canadians can share their skills in developing countries, both for immediate benefit, and to validate the optimism that a better future is coming.

Laurence Lee MD
Memorial University of Newfoundland, St. John's, Canada
E-mail: lwlee@shaw.ca

References

1 *Ben Ammar MS.* The skills exodus - being bled dry! Can J Anesth 2005; 52: 236–7.
2 *Zarkaria F.* The Future of Freedom. New York: W. W. Norton; 2004.

Anesthetic implications of Reinke's edema of vocal cords

To the Editor:
Reinke's edema (RE) also known as polypoid corditis, laryngitis, degeneration or chronic hypertrophic laryngitis[1,2] is associated with chronic accumulation of fluid in the subepithelial compartment of the vocal fold.[2] The etiology of RE is not known. It is more common in females, and often associated with smoking, vocal abuse and gastroesophageal reflux disease (GERD). Unilateral RE, sometimes resembling a cyst, may be associated with vocal cord paresis. RE can be

FIGURE Fibreoptic bronchoscopic view of laryngeal opening in an elderly patient with hoarseness of voice showing bilateral Reinke's edema, more on the left.

a complication following prolonged tracheal intubation. Patients with unsuspected RE can present airway obstruction under anesthesia.[3]

The treatment of RE may be conservative, treating the GERD with medications (omeprazole), stopping smoking and reducing voice abuse. The surgical treatment consists of excising the lesions, medialization laryngoplasty for vocal cord paresis, and excision of the superficial lamina propria of the vocal folds by surgery or CO_2 laser technique.[4,5]

We have managed two patients with RE. In both cases we could identify the polypoid appearance of the vocal fold (Figure) during laryngoscopy. We provided anesthesia for laryngoscopy or laryngoscopic surgery with propofol induction and succinylcholine muscle relaxation for tracheal intubation, using a smaller 6 or 7 mm internal diameter endotracheal tube with ease. We maintained anesthesia with sevoflurane, oxygen and air and provided muscle relaxation with mivacurium. Following tracheal extubation we administered *iv* dexamethasone 10 mg and recemic epinephrine inhalation treatment (racepinephrine 0.5 mL in 3 mL of normal saline in nebulizer) for glottic edema. Neither patient experienced airway complications, and both recovered uneventfully.

S.S. Moorthy MD
Sanjay Gupta MD
Troy Pfefferkorn MD
Roudebush VA Medical Center, Indianapolis, USA
E-mail: sreenivasa.moorthy@med.va.gov

References

1 *Marcotullio D, Magliulo G, Pietrunti S, Suriano M.* Exudative laryngeal diseases of Rienke's space: a clinicohistopathological framing. J Otolaryngol 2002; 31: 376–80.

2 *Koufman JA, Belafsky PC.* Unilateral or localized Rienke's edema (pseudocyst) as a manifestation of vocal fold paresis: the paresis podule. Laryngoscope 2001; 111: 576–80.

3 *d'Hulst D, Butterworth J, Sebron D, Oaks T, Matthews B.* Polypoid hyperplasia of the larynx misdiagnosed as a malpositioned laryngeal mask airway. Anesth Analg 2004; 99: 1570–2.

4 *Slavit DH.* Phonosurgery in the elderly: a review. Ear Nose Throat J 1999; 78: 505–9.

5 *Nielsen VM, Hojslet PE, Karlsmose M.* Surgical treatment of Rienke's oedema (long-term results). J Laryngol Otol 1986; 100: 187–90.

Dexmedetomidine is a useful adjunct for awake intubation

To the Editor:

Awake intubation in the patient with a potentially difficult airway is a stimulating procedure which may be associated with wide hemodynamic changes. To attenuate this response, blunting of airway reflexes is required without losing the patient's cooperation. Dexmedetomidine (DEX), a highly selective α_2 agonist, has the unique property of sedating and providing analgesia without affecting the patient's respiration.[1,2] It has been successfully used for attenuating the stress response to laryngoscopy.[3] We report a patient in whom DEX with topical anesthesia provided favourable conditions for awake fibreoptic intubation. After approval by the Board of Studies, informed consent was obtained.

A 62-yr-old ASA II patient (175 cm, 64 kg) with faciomandibular abnormalities secondary to an old gunshot wound was scheduled for plastic facionasal reconstruction. His preanesthetic airway evaluation revealed a mouth opening of 1 cm, and a distorted nasal septum with patent left nasal passage.

Awake fibreoptic intubation was planned. DEX 1 $mg \cdot kg^{-1}$ *iv* diluted to 10 mL with 0.9% normal saline