2 *Benumof JL, Feroe D.* Swallowing topically administered 4% lidocaine results in nausea and vomiting. Am J Anesth 1998; 25: 150–2.

REPLY:

We would like to thank Dr. Benumof for his interest and suggestions. Our report described the occurrence of complete upper airway obstruction with progressive life threatening arterial oxygen desaturation during awake fibreoptic intubation in two cases.[1] Both patients had unstable cervical spine fractures and they were stabilized in halo traction. The objective of our report was to remind anesthesiologists that fibreoptic endoscopies under such challenging situations might lead to drastic complications as those which have been experienced by Dr. Benumof.

A combination of factors could have contributed to the occurrence of complete upper airway obstruction including, mainly, deep sedation and inadequate topicalization. However, we agree with Dr. Benumof that accumulation of perilaryngeal secretions might have played a role in the development of these complications. In our practice, we always ask the patient to gargle lidocaine sprayed or applied with pledgets and to suction all the fluids from the mouth with a Yankauer suction catheter. The Yankauer catheter is inserted a few times gently into the pharynx and is advanced gradually into the hypopharynx at the last stages of topicalization. The suction tip is also used to test the suppression of the gag reflex. We rarely use tho suction port of the fibreoptic scope to suction perilaryngeal secretions. Nonetheless, Dr. Benumof's method of topicalization is an attractive technique and could ensure the clearing of most perilaryngeal secretions and fluid.[2]

Glenn McGuire MD
Hossam El-Beheiry MBBCH PhD FRCPC
Toronto, Ontario

References

1 *McGuire G, EI-Beheiry H.* Complete upper airway obstruction during awake fibreoptic intubation in patients with unstable cervical spine fractures. Can J Anesth 1999; 46: 176–8.
2 *Benumof JL, Feroe D.* Swallowing topically administered 4% lidocaine results in nausea and vomiting. Am J Anesth 1998; 25: 150–2.

Bullard assisted trachlight technique

To the Editor:

I am writing to describe a method of intubation. For some time, we have been using a Bullard assisted trachlight (BAT) technique.

The intubating stylet is removed from the Bullard laryngoscope. It is used with the battery handle alone without the fibreoptic light source. The Bullard laryngoscope is inserted into the pharynx in the midline. When the vocal cords are visualized, the laryngoscope is moved to the left side of the mouth. Next, the trachlight is inserted into the right side of the mouth near the midline. The endotracheal tube is then guided under direct vision through the vocal cords. The endotracheal tube is fed distally into the trachea using a one handed trachlight technique.[1]

When the Bullard laryngoscope is used with its stylet, perfect alignment is necessary to push the endotracheal tube through the vocal cords. The BAT method does not require a perfect view of the vocal cords. The trachlight allows for manipulation of the endotracheal tube independent of the view from the Bullard. Also, the trachlight better illuminates the vocal cords. The endotracheal tube position is therefore confirmed both by direct vision and the light transmitted in the anterior neck.

Personally I do not like probing blindly in the laryngeal area with the trachlight and feel limited in maneuverability when using the Bullard laryngoscope alone.

There is virtually no learning curve as this technique is rapidly learned by residents. Also, the Bullard laryngoscope is more easily and quickly cleaned than the fibreoptic scope.

Glenn McGuire MD
Martin Krestow
Toronto, Ontario

Reference

1 *Crosby E.* A tip for the trachlight. Can J Anaesth 1998; 45: 708–9.

Nasal intubation with the Trachlight

To the Editor:

Hung *et al.*[1,2] describe a technique for nasal intubation with the Trachlight (TL) in which the stylet is removed to make it more pliable and flexible for atraumatic passage through the nose. We had poor success rate without the stylet due to difficulty in redirecting the light towards the glottis. We describe Trachlight-guided nasal intubation without removal of the stylet.

A 17-yr-old, 65-kg, ASA 1 man presented for repair of a fractured jaw: mouth opening was 21 mm. The nostril was topicalised and a cricothyroid puncture performed with lidocaine. An 8 mm flexible tracheal tube (TT) was mounted on a TL with the stylet in

position and bent at right angles, 7 cm from the tip. The Trachlight-tracheal tube (TL-TT) was inserted into the nostril with the Trachlight handle at 90° to the sagittal plane and advanced until light was seen in the oropharynx when the handle was rotated 90° into the sagittal plane. After further advance, a blurred light was seen lateral to the cricothyroid membrane. The TL-TT tip was maneuvered anteromedially, a bright point of light was seen at the cricothyroid membrane, the stylet was withdrawn and the TT advanced into the trachea. Placement was confirmed by capnography. The time taken was 12 sec.

This case illustrates that atraumatic Trachlight-guided nasal intubation is possible with the stylet in position. Increased risk of nasal trauma without the stylet may be is outweighed by a higher success rate, less pharyngeal trauma and fewer head-neck manipulations.

F. Agrò
J. Brimacombe*
L. Marchionni
M. Carassiti
R. Cataldo
Rome, Italy
*Cairns, Australia

References

1 *Hung OR, Stewart RD.* Lightwand intubation: I - A new lightwand device. Can J Anaesth 1995; 42: 820–5.
2 *Hung OR, Pytka S, Morris I, Murphy M, Stewart RD.* Lightwand intubation: II - Clinical trial of a new lightwand for tracheal intubation in patients with difficult airways. Can J Anaesth 1995; 42: 826–30.

Reply:

I must thank Dr. Agro for his suggestion regarding the use of Trachlight® for nasotracheal intubation. During the development of the Trachlight®, we found that nasotracheal intubation could be easily performed without the rigid stylet. Occasionally, it was necessary to flex the neck, apply pressure to the larynx, or inflate the ETT cuff to align the ETT tip with the glottis during intubation. We tested this technique in 109 patients. Using the Trachlight® without the rigid internal stylet, intubation was successful in all but one patient. It was difficult to elevate the ETT tip anteriorly to align with the glottis with this patient. This difficulty was overcome by using the rigid stylet to form the "hockey stick" configuration as described by Dr. Agro. In my opinion, most Trachlight® nasotracheal intubations can be effectively performed without the stylet. However, if it is difficult to elevate the ETT tip to align with the glottis of the patient who has an "anterior larynx" during intubation, nasotracheal intubation can be repeated with the rigid Trachlight® in the "hockey stick" configuration. Alternatively, the anterior elevation of the ETT tip with the pliable Trachlight® can be achieved with the use of the Endotrol®,[1] or a nylon string fastened at the distal end of the Trachlight®.[2]

I welcome Dr. Agro's effort in studying the light-guided nasal intubating technique and I strongly encourage anesthesia staff and trainees to practice this technique in appropriate patients regularly. The payoff will become evident when a difficult or challenging situation arises.

Orlando R. Hung MD FRCPC
Halifax, Nova Scotia

References

1 *Asai T.* Endotrol tube for blind nasotracheal intubation (Letter). Anaesthesia 1996; 51: 507.
2 *Iseki K, Murakawa M, Tase C, Otsuki M.* Use of a modified lightwand for nasal intubation (Letter). Anesthesiology 1999; 90: 635.

Thermal injury with pulse oximeter probe in hypothermic patient. Pulse oximeter probe burn in hypothermia

To the Editor:

Oxygen saturation monitoring with pulse oximeter is a standard practice in anesthesia.[1,2] Many reports of thermal injury with pulse oximeter are reported and various mechanisms of injury have been proposed.[1,3,4,5] This report highlights the risk of thermal injury in hypothermic patient with pulse oximeter.

A live related renal recipient underwent general anesthesia with standard monitoring. Patient became hypothermic during surgery and required elective ventilation for short duration in PACU. He became normothermic. Thereafter he was extubated and shifted to kidney transplant unit with stable vitals.

Next morning, on the dorsum of thumb, and web between thumb and index finger (the site of probe application) two bullous eruptions were noticed. The blisters were dressed with framycetin, which subsequently healed without complication.

Burns following pulse oximeter is uncommon but not rare. The proposed mechanisms of oximeter probe burns are: increased probe temperature either inappropriate combinations or probe overheating, due to mechanical