

The Continuing Search for the Right Balance

Anesthesiologists are currently viewed as airway experts. Interestingly, advanced airway management were initially primarily performed to resuscitate victims of drowning and patients afflicted with diphtheria infection by non-anesthesiologists.^{1,2} In 1878, the first elective use of endotracheal intubation for anesthesia was performed by Dr. William Macewen, a Scottish surgeon, using an awake, digital blind intubation technique.¹

The invention of the Macintosh and Magill laryngoscope blades as well as the introduction of curare in the 1940's facilitated tracheal intubation such that it already became a routine component of anesthetic management for major surgeries.² Advancements involving flexible fiberoptic cables paved the way for flexible fiberoptic bronchoscope in the late 1960's.³ Later on, the need for a wider angle of view to address difficult intubation cases gave birth to a variety of videolaryngoscopes in the 2000s.

As early as 2004, there were already reports combining airway equipment to facilitate intubation.⁴ However, it was not until 2011 that Boet et al. coined the term "multimodal airway approach".⁵ Since then, this practice has been explored further by anesthesiologists and is now included as an option in the American Society of Anesthesiologists difficult airway algorithm for both adult and pediatric patients.⁶

The second article in this special issue described how a non-traditional combination of advanced airway equipment easily circumvented the difficulty posed by the initial sole airway equipment technique. Meanwhile, the third article incorporated a twist in the multimodal airway approach by employing two different techniques at different stages of the surgery.

These two articles are particularly encouraging since an awake intubation for anticipated difficult airway is hardly applicable for the pediatric population. In addition, the combination described in the second article is reproducible in other parts of the country. The COVID-19 pandemic already created a rapid paradigm shift favoring the acceptance and availability of videolaryngoscopes in routine practice.⁷⁻⁹ Bonfils intubating fiberscope does not have a steep learning curve.¹⁰ It also requires less maintenance compared to a fiberoptic bronchoscope.

Synergism is a pharmacologic principle that has long been used by anesthesiologists in maintaining homeostasis through the provision of "balanced anesthesia" and "multimodal analgesia".^{11,12} The time has come to extend this concept to non-pharmacologic entities as well.

As the field of anesthesiology continues to expand in coverage and complexity, the search continues for the perfect complement that will provide the right balance encompassing all elements.

Evangelina K. Villa, MD

*Department of Anesthesiology
College of Medicine and Philippine General Hospital
University of the Philippines Manila*

REFERENCES

- Szmuk P, Ezri T, Evron S, Roth Y, Katz J. A brief history of tracheostomy and tracheal intubation, from the Bronze Age to the Space Age. *Intensive Care Med.* 2008 Feb;34(2):222-8. doi: 10.1007/s00134-007-0931-5.
- Doyle J. A brief history of clinical airway management. *Rev Mex Anest.* 2009;32(Suppl: 1):164-167.
- Pieters BM, Eindhoven GB, Acott C, van Zundert AAJ. Pioneers of laryngoscopy: indirect, direct and video laryngoscopy. *Anaesth Intensive Care.* 2015 Jul;43 Suppl:4-11. doi: 10.1177/0310057X150430S103.
- John Doyle D. GlideScope-assisted fiberoptic intubation: a new airway teaching method (letter). *Anesthesiology.* 2004 Nov; 101(5):1252. doi: 10.1097/00000542-200411000-00046.
- Boet S, Dylan Bould M, Diemunsch PA. Combined rigid videolaryngoscopy-flexible bronchoscopy for intubation. *Korean J Anesthesiol.* 2011 May;60(5):381-2. doi: 10.4097/kjae.2011.60.5.381.
- Apfelbaum JL, Hagberg CA, Connis RT, Abdelmalak BB, Agarkar M, Dutton RP, et al. 2022 American Society of Anesthesiologists Practice Guidelines for Management of the Difficult Airway. *Anesthesiology.* 2022 Jan 1;136(1):31-81. doi: 10.1097/ALN.0000000000004002.
- Davies M, Hodzovic I. Videolaryngoscopy post COVID-19. *Trends Anaesth Crit Care.* 2021 Feb;36:49-51. doi: 10.1016/j.tacc.2020.09.006
- De Jong A, Pardo E, Rolle A, Bodin-Lario S, Pouzeratte Y, Jaber S. Airway management for COVID-19: a move towards universal videolaryngoscopy? *Lancet Respir Med.* 2020 Jun;8(6):555. doi: 10.1016/S2213-2600(20)30221-6.
- Saoraya J, Musikatavorn K, Sereeyotin J. Low-cost Videolaryngoscopy in Response to COVID-19 Pandemic. *West J Emerg Med.* 2020 May 22;21(4):817-818. doi: 10.5811/westjem.2020.5.47831.
- Falcetta S, Pecora L, Orsetti G, Gentili P, Rossi A, Gabbanelli V, et al. The Bonfils fiberscope: a clinical evaluation of its learning curve and efficacy in difficult airway management. *Minerva Anesthesiol.* 2012 Feb;78(2):176-84.
- Lundy JS. Balanced anesthesia. *Minnesota Med J.* 1926; 9:399-404.
- Kehlet H, Dahl JB. The value of "multimodal" or "balanced analgesia" in postoperative pain treatment. *Anesth Analg.* 1993 Nov; 77(5): 1048-56. doi: 10.1213/00000539-199311000-00030.