



Contents lists available at ScienceDirect

Trends in Anaesthesia and Critical Care

journal homepage: www.elsevier.com/locate/tacc

The article of month: A way to communicate with airway enthusiasts

The “Article of Month” session has been a traditional way within the European Airway Management Society (EAMS) to recommend airway enthusiasts the latest scientific advances published in the field of airway management since 2017 [1]. In 2018 members of the EAMS Board of Directors recommended 11 papers of interest on the society’s web page: <http://eamshq.net>.

The first article was about a 5-year retrospective analysis of extraglottic airway devices [2]. The authors pointed out the incidence of perioperative extraglottic airway device failure and identified adjustable factors related with this complication that may be the main objective of appealing or preventative interventions. The extraglottic airway failure incidence was 1.9%. Factors associated with failure were the use of desflurane or the use of smaller sized devices in adults. The importance of that study is the focus on patient- and procedure-related factors associated with failure in the use of extraglottic airway devices.

EAMS also recommended two different guidelines about airway management. One was the Canadian Airway Focus Group recommendations for anticipated difficult airway [3]. This society issued specific recommendations on the handling of the anticipated difficult airway. The highlights of this specific article are the recommendations on the planning phase in case of failure and the focus on oxygenation for these patients. The second article was the newest Difficult Airway Society (DAS) guideline for the management of tracheal intubation in critically ill adults [4]. This guideline described a comprehensive strategy to optimize airway management, tracheal intubation and oxygenation in critically ill patients. Here, the non-technical skills were also reviewed including the role of the airway team, communication, planning and how to achieve a shared mental model in between all the team members.

In March 2018 EAMS announced two articles reflecting last year’s European Airway Congress theme: “From the past to the future of airway management”. The first article was the classic paper by Cormack and Lehane “Difficult tracheal intubation in obstetrics” [5]. When we read the 1984 article carefully, we realized that, yes, the authors do mention the four grades of the best view obtained in direct laryngoscopy. However in its core, the article was about teaching airway management. According to Lorenz Theiler, secretary of EAMS, difficulties in airway management are rarely encountered, therefore we have to teach deliberately the difficulty in airway management during daily clinical practice. Cormack and Lehane were doing a great job in pointing out the transfer of training to increase patient safety. The second article was another classic paper: Magill’s “Technique in endotracheal anaesthesia” about airway management, dated 1930 [6]. Reading about his thoughts, we were awed about how much anaesthesia had stayed the same over the last ninety years. In fact, many beliefs we have

about airway management are just beliefs that come from another time, driven by circumstances very different from today.

Then, a recent narrative review by Tim Cook [7], titled “Strategies for the prevention of airway complications” was recommended to members of the society. This article does not feature research results in the usual way, instead it is a nice overview of many important points that apply to up-to-date airway management. All the developments in technology facilitating anaesthesia and safer airway management are limited by the provider which is nowadays called “human factors”. These “non-technical aspects of airway management are critically important for communication and decision making during airway crises, acknowledging a ‘cannot intubate, cannot oxygenate’ situation and transitioning to emergency front of neck airway” [7].

Another nice article about advances in old strategies by new technology on the back-up for potential difficult re-intubation in the Intensive Care Unit setting [8]. The authors examined the impact of the guide wire of the staged extubation set on correct positioning and patient tolerance. This was one of the first manuscripts looking at the feasibility of this approach to increase patient safety with less invasive measures over a prolonged time period.

After summer, the article of month in August was a German study from an anaesthesiologist and emergency physician [9] in Leipzig. A closer look at raising concerns about the out-of-hospital use of supraglottic airway devices (SAD). The most used SAD in Germany is the Laryngeal Tube (LT). The LT was criticized for the unrecognized malposition’s leading in massive gastric inflation ($\approx 10\%$) and severe tongue swelling ($\approx 40\%$). It is not clear whether the specific malposition has any effect on the results of patients ventilated by LT. Therefore the authors retrospectively analyzed data from the German Resuscitation Registry for a study period of 6½ years, including 43.000 patients after standard out-of-hospital cardiac arrest treatment who were ventilated with a laryngeal tube compared to a tracheal tube. This study demonstrated that patients treated with SAD had the lowest hospital admission rate with ROSC, and the lowest survival rate to hospital discharge with good neurological outcome. The results were better if the LT was immediately replaced with a tracheal tube by an emergency physician at the scene.

Michael Seltz Kristensen (current president of EAMS) selected an article reminding using the case of difficult or failed direct laryngoscopy we must: 1) consider awake intubation, and 2) if anaesthesia was induced an angulated videolaryngoscope might fail. Crucial is to have other rescue options available, including alternative techniques for intubation and a plan that is highly successful in ventilation or front of neck access [10] to guarantee oxygenation of the patient.

An editorial from Massimiliano Sorbello et al. [11] emphasized that “Good judgment comes from experience and a lot of that comes from bad judgment”. Reading this editorial on airway management let the reader realize that “mastering others is a strength, but mastering oneself makes us fearless”.

The last Cochrane review [12] was about the detection of the unanticipated difficult airway, still a potentially life-threatening event during anaesthesia or acute care. Unsuccessfully managed upper airways are associated with serious morbidity and mortality. A number of bedside screening tests are performed in our daily practice to recognize those risks, but their accuracy and benefit still remains uncertain. This review aimed at investigating the diagnostic accuracy of frequently used airway assessment tests for determining the physical status of patients with normal airways. Interestingly, all investigated tests showed low sensitivities with high variability but higher specificities across all tests. The standard bedside airway examination tests are not usable as screening tests for difficult airway management. Surprisingly, the upper lip bite test showed the highest accuracy as a diagnostic test of all investigated examinations.

In summary, the board of directors of EAMS hope that our selection of articles met the interest of the readers. With that, we invite all airway enthusiasts to submit a short paragraph of unstructured text describing the reason why a specific article should be recommended to the members of the society as “Article of the Month”. If the educational, scientific, and clinical interest of the EAMS members will be met these proposals have a high chance of being selected for posting on the EAMS web page. The 2019 EAMS will certainly continue the well established tradition for dissemination of scientific literature with new articles, hopefully recommended by EAMS members. The first one is already online on our web page.

References

- [1] K.T. Saracoglu, M. Sorbello, A. Saracoglu, European airway management society (EAMS) structure and activities, *Trends Anaesth. Crit. Care* 18 (2018) 13–15.
- [2] A. Vannucci, I.T. Rossi, K. Prifti, D. Kallogjieri, G. Rangrass, D. DeCresce, et al., Modifiable and nonmodifiable factors associated with perioperative failure of extraglottic airway devices, *Anesth. Analg.* 126 (2018) 1959–1967.
- [3] J.A. Law, N. Broemling, R.M. Cooper, P. Drolet, L.V. Duggan, D.E. Griesdale, et al., The difficult airway with recommendations for management—part 2—the anticipated difficult airway, *Can. J. Anaesth.* 60 (2013) 1119–1138.
- [4] A. Higgs, B.A. McGrath, C. Goddard, J. Rangasami, G. Suntharalingam, R. Gale, et al., Difficult airway society; intensive care society; faculty of intensive care medicine; royal college of anaesthetists. Guidelines for the management of tracheal intubation in critically ill adults, *Br. J. Anaesth.* 120 (2018) 323–352.
- [5] R.S. Cormack, J. Lehane, Difficult tracheal intubation in obstetrics, *Anaesthesia* 39 (1984) 1105–1111.
- [6] I.W. Magill, Technique in endotracheal anaesthesia, *Br. Med. J.* 2 (1930) 817–819.
- [7] T.M. Cook, Strategies for the prevention of airway complications - a narrative review, *Anaesthesia* 73 (2018) 93–111.
- [8] S. McManus, L. Jones, C. Anstey, S. Senthuran, An assessment of the tolerability of the Cook staged extubation wire in patients with known or suspected difficult airways extubated in intensive care, *Anaesthesia* 73 (2018) 587–593.
- [9] M. Bernhard, N.H. Behrens, J. Wnent, S. Seewald, S. Brenner, T. Jantzen, et al., Out-of-hospital airway management during manual compression or automated chest compression devices : a registry-based analysis, *Anaesthesist* 67 (2018) 109–117.
- [10] Z.I. Arslan, The channelled Airtraq® as a rescue device following failed expected difficult intubation with an angulated video laryngoscope, *Turk J Anaesthesiol Reanim* 46 (2018) 399–401.
- [11] M. Sorbello, A. Afshari, S. De Hert, Device or target? A paradigm shift in airway management: implications for guidelines, clinical practice and teaching, *Eur. J. Anaesthesiol.* 35 (2018) 811–814.
- [12] D. Roth, N.L. Pace, A. Lee, K. Hovhannisyan, A.M. Warenits, J. Arrich, et al., Airway physical examination tests for detection of difficult airway management in apparently normal adult patients, *Cochrane Database Syst. Rev.* 5 (2018) CD008874.

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11 February 2019