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The 2018 Virtual Collection on Airway Management of Trends in Anaesthesia and Critical Care (TACC)

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The 2018 Virtual Collection on Airway Management of Trends in Anaesthesia and Critical Care (TACC)

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With the European Airway Management Congress in Catania approaching, we created this special issue to set the mood for learning about airway management.
We selected the best 11 articles published in TACC during the past 1100 days since the most recent release of the Virtual Collection - Airway Management in 2015. Reviewing the archives of Trends in Anaesthesia and Critical Care we carefully selected these articles covering six important topics: algorithms and prediction methods for difficult airways, education, paediatric airway management, flexible optic intubation and of course the current hot topics apnoeic oxygenation and videolaryngoscopy.

If you are travelling to Catania in December - and we hope to see you there! - This is the perfect read to get you up-to-date with what is new in recent airway management research and practice. If you cannot make it to beautiful Sicily for a sunny study escape, you may still enjoy this collection, as it will give you a comprehensive overview of the most recent results and opinions in airway management with many contributions from the leaders in this clinical field. As you will see in the summary following this introduction, we did not only include original works, but also review articles, opinion papers and even editorials. The focus is on clinical applicability and the potential to change clinical practice in airway management.

As the official voice of the European Airway Management Society (EAMS), Trends in Anaesthesia and Critical Care depends on active contributions from our members, both clinicians and researchers who are dedicated to advancements in the field of airway management. We encourage active participation from our members and look forward to seeing you in Catania as well as receiving your latest ideas and results. We not only invite EAMS-members but also all other clinicians and researchers in the field of airway management to continue to submit your manuscripts on original research, reviews or opinion papers about new exciting ideas to the airway section of Trends in Anaesthesia and Critical Care.

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Algorithms and prediction methods for the management of difficult airways:

1 Strategies and algorithms for the management of the difficult airway: Traditions and Paradigm Shifts 2017 (1)

Joerg C. Schaeuble, Thomas Heidegger

Do you sometimes feel overwhelmed by the abundance of guidelines for airway management?
Management of the expected difficult airway, the unexpected difficult airway, the difficult airway in the obese patient, the parturient, the paediatric population?
This review may provide a better understanding of the development and recent changes in international guidelines on the management of difficult airways as well as their limitations. The article is easy to read and includes many comprehensive graphs.

https://doi.org/10.1016/j.tacc.2017.01.062

2 Airway Management Academy: A global initiative to increase patient safety during airway management by medical education (2)

Johannes M. Huitink, Jochen H. Bretschneider

Adult learning is very different from child learning. This narrative review article focusses on the individual aspects of adult learning, from junior staff to experienced specialists, in the management of difficult airways. It emphasises the need for multimedia techniques and multidisciplinary approach and offers insight into the challenges as well as ideas for adult airway teaching.

http://dx.doi.org/10.1016/j.tacc.2014.12.001

Education:

3 Surgically modified airways: What every anesthesiologist should know (3)

Ahmad M. Abou Leila, James R. Yon, Gennadiy Voronov, Serge Tyler, Alexander J. Sauper

This is an extremely helpful practice guide for anaesthesiologists and intensive-care physicians involved in the care of patients with surgically modified airways - imagine post-laryngectomy, post-tracheostomy and ENT-patient population. The authors describe the surgical techniques in detail and explain their indications, limitations and pitfalls in their management.

http://dx.doi.org/10.1016/j.tacc.2015.03.004

4 The significance and weight of manikin studies in airway management (4)

Laura Reviriego-Agudo, Andreas Roca de Togores-Lopez, Pedro Charco-Mora

In this invited editorial, two articles are being compared and summarised in a rather enjoyable way. The authors of the review take a look at two original studies that both assess the use of different supra-glottic airway devices in novices and in the prehospital environment in manikins. The conclusion: simulation is a way forward to study airway management. The purpose of such manikin studies needs to be defined and we need to find ways to translate the use of these methods into clinical practice and patient care. We included both articles discussed in the review for your convenience.

https://doi.org/10.1016/j.tacc.2018.07.004

https://doi.org/10.1016/j.tacc.2018.05.004 (5)
https://doi.org/10.1016/j.tacc.2018.05.003 (6)

Paediatric Airway:

5 Basic airway equipments in pediatric cardiac arrest management (7)

Kemal Tolga Saracoglu, Ayten Saracoglu, Haluk Kafali

The authors of this narrative review look at different techniques and airway management devices that are currently used in paediatric resuscitation. They compare the available options and conclude with a recommendation for the use of the laryngeal mask airway as a quick and easy to learn technique with a low rate of complications.

http://dx.doi.org/10.1016/j.tacc.2016.03.006

Apnoeic Oxygenation:

6 Improving apnoeic oxygenation use for rapid sequence intubation in an emergency department (8)

Jen Heng Pek, Hui Min Kang, Evelyn Wong

This is a great original research article presenting the mid-term effectivity of a low-cost intervention, the use of apnoeic oxygenation in an emergency department as part of a new standardised approach, and its contribution to patient safety.

http://dx.doi.org/10.1016/j.tacc.2017.01.059

7 High flow nasal oxygen therapy in adult anaesthesia (9)

Benjamin H. Millette, Vassilis Athanassoglou, Anil Patel

High-flow nasal oxygenation is in everyone's mouth, … or nose? If you are curious about the how's and why's this review article is just for you. The authors explain the mechanism and physiology behind the technique that has recently been taking operating theatres, emergency departments and paediatric intensive care units by storm. They discuss the possibilities, opportunities and benefits of its use as well as the remaining questions about high-flow nasal oxygenation.

https://doi.org/10.1016/j.tacc.2017.12.001

8 THRIVE: The answer my friend, is blowing in the (high flow) wind! (10)

Massimiliano Sorbello, Fauzia Mir, Alistair F. McNarry

As mentioned above, transnasal humidified rapid-insufflation ventilatory exchange (THRIVE) as one form of high-flow nasal oxygenation is taking clinical anaesthesia and intensive care by storm. In addition to portraying the benefits and physiology of this method, the authors discuss many of the open questions in detail and suggest focussing on finding the correct patient population for this new technique.

https://doi.org/10.1016/j.tacc.2018.08.006

Fibreoptic Intubation:

9 Practical aspects and training in fibreoptic intubation (11)

John Song En Lee, Jolin Wong, Rehana Iqbal, Theodore Gar Ling Wong, Patrick Wong

Are you an anaesthesiology resident? Are you a specialist looking to improve your airway management skills? This narrative article reviews the importance of awake fibre-optic intubation skills and necessity of using this technique with confidence and as part of an airway management algorithm. You will benefit from lots of tips on sedation, optimal positioning of the patient and use of the scope. The authors emphasise the need for frequent training and opportunities in a simulated setting.

http://dx.doi.org/10.1016/j.tacc.2016.08.002

Videolaryngoscopy:

10 Effect of the tube-guiding channel on intubation success with videolaryngoscopes (12)

S. Nabecker, X. Koennecke, L. Theiler, C. Riggenbach, R. Greif, M. Kleine-Brueggeney

Videolaryngoscopy is no longer merely an option. It has become a necessity. Yet, we do not know which of the available devices performs best. This original work looks at three different channelled videolaryngoscopes in patients with a simulated difficult airway and compares the use of the channelled to the unchannelled approach. The results may help decide on which device to implement in your hospital setting.

https://doi.org/10.1016/j.tacc.2017.11.002

11 Use of the McGRATH TM MAC: To view or not to view? (13)

Katherine C. Normand, Leslie A. Vargas, Tyrone Burnett Jr., Srikanth Sridhar, Chunyan Cai, Xu Zhang, Travis H. Markham, Sara Guzman-Reyes, Carin A. Hagberg

Videolaryngoscopy is taking over direct laryngoscopy as we have known it. The question remaining: which device works best? This piece of original research may offer some insight. The group around Carin Hagberg compares the use of McGrath videolaryngoscopes as direct laryngoscopy and videolaryngoscopy in 100 patients with a simulated difficult airway. The important marker of first pass success is higher if the McGrath is used as a videolaryngoscope, particularly in patients with more than two clinical indicators for a difficult intubation.

https://doi.org/10.1016/j.tacc.2018.02.003

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