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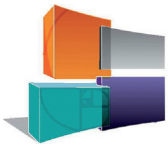

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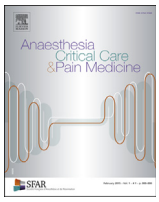

Editorial

French guidelines of paediatric airway management: Job done?

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No aspect of paediatric anaesthesia is more important than airway management as safe and effective anaesthesia relies on the ability to support oxygenation and ventilation throughout. Difficulties in airway management, however, are frequently encountered even in healthy children and continue to be a leading cause of perioperative morbidity and mortality.

In addition, limited oxygen reserves coupled with a high oxygen consumption in young children can lead to a frighteningly quick clinical deterioration which require simple and clear concepts to prevent harm. For an outsider, it would be reasonable to assume that such uniform protocols and approaches are easy to develop and introduce.

However, anaesthesia airway management practice varies widely and as a consequence lead to large differences in the incidence of severe critical events. This has recently led to calls to implement European guidelines for difficult paediatric airway management and good practice recommendations [1,2]. But, is there really one optimal way to manage the (difficult) paediatric airway and are there some essential clinical practices that will prevent an avoidable morbidity and mortality arising from paediatric airway management?

In order to address this complex problem from a French speaking perspective, an expert group assembled from the *Societé Française d'Anesthésie et de Réanimation* (SFAR; French Society of Anaetshesia and Intensive Care Medicine) and *Association Des Anesthésistes Réanimateurs Pédiatriques d'Expression Francophone* (ADARPEF) has addressed seven issues pertinent to paediatric airway management practices [3]. This current guideline presents a total of 12 recommendations arising from these issues. Only one area, the removal of the airway device in the child, is devoid of any firm clinical recommendation.

The choice and the sequence of addressing these issues may be surprising to the non-Francophone anaesthesiologist. However, these issues should be considered as stand-alone items as they provide simple statements of good clinical practice to the question posed. The need for some of these statements is likely to reflect current practices prevalent in France such as the use of intravenous lidocaine and the need to use muscle relaxants for tracheal intubation. These areas are non-controversial in the English-speaking world.

Other areas highlighted such as the place of videolaryngoscopy are at the forefront of current research initiatives and are in urgent need of generating sufficient evidence. There is still only scant data as to which device, age group or even practitioner would most benefit from its use and as indicated by the stated 'prerequisites'. However, other questions arise such as: why is the practitioner mandated to interrupt the intubation manoeuvre if the oxygen saturation decreases to $< 95\%$? Alternatively, one might ask: is the use of videolaryngoscopy not permitted in children who, due to their underlying disease, cannot achieve saturations of $> 95\%$? On a very positive side though, the current guideline is a treasure trove for research ideas and quality initiatives (QI) relating to paediatric airway management.

The process of generating these guidelines also requires some thought. The expert group followed the principles of the Grading of Recommendations Assessment, Development and Evaluation (GRADE®) system to assess the quality of evidence for all responses to the questions. For many points, evidence is lacking due to the low number or quality of published research. The Delphi method was finally used to obtain a consensus for the statement. The Delphi method is a thorough assessment process to establish an expert consensus on the questions posed. It is, however, vitally dependent on the correct and complete question put forward in the first place. Inevitably, some 'burning issues' or 'hot topics' of paediatric airway management are deliberately omitted, have newly emerged since or are in need of an overhaul. What is the advice for emergency front of neck airway? What is the role of high-flow trans-nasal humidified oxygen during intubation attempts? What is the difficult airway algorithm for children aged less than 1 year? These topics were perhaps not the ones most urgently requiring addressing at this stage. Further developments in paediatric anaesthesia including airway management will pose new questions to be addressed in the future. I am sure, however, that the authors associated with this project will vouch for the immense cost related to this project in terms of time, money and emotions. Only time will tell, when or if these guidelines will be formally updated.

Intriguingly, the current document also offers four expert's opinion statements, distinct to the formal seven issues raised.

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Without further information as to why these areas were addressed separately, it is likely that these opinions relate to anomalies of existing anaesthetic practice in France where the authors felt a most urgent need to advise. These are techniques and long established (regional) habits that should no longer be practiced due to safety and quality considerations despite their perceived efficiency and ability to generate income. The statement that children who undergo elective adenoidectomy must have a cuffed endotracheal tube inserted will surely raise some eyebrows. Although a supraglottic airway device (not a face mask) could be considered as an acceptable method of airway protection for this procedure, this current expert opinion statement is consistent with the most widely used practices in Europe [4]. The effect of such recommendations on preventing airway related morbidity need to be prospectively monitored in this patient population to better inform the argument. It is essential that patient selection and perioperative standards be always adhered to.

Two further statements supplement one of the previous formal questions of rapid sequence induction in children. The recommendations to abandon cricoid pressure and provide positive pressure ventilation following the induction of anaesthesia (controlled rapid sequence induction) are consistent with most recent evidence and statements [5–7].

It is important to realise that the current French Paediatric Airway guidelines were produced under the auspices of two major French speaking anaesthetic societies. There remains, however, an urgent need to also involve other specialties with a significant interest in the management of paediatric airway such as paediatric intensive care, emergency medicine and neonatology who all continue to indicate significant difficulties in this field [8,9]. It is time to embrace inter-disciplinary collaboration and generate frameworks of overarching principles affecting not only paediatric airway management, but all aspects of paediatric care that can subsequently be adapted by each department using their existing local expertise. For example, the Royal College of Anaesthetists has a long tradition to lead and produce such collaborative guidance in the form of Guidelines for the Provision of Anaesthesia Services (GPAS) documents that are generated in large collaborations with different specialties and stakeholders. The success of such an approach has been documented most recently [10,11].

The French Paediatric Airway Management Guidelines are an important and laudable step to improve and harmonize paediatric airway management practice in France and other French speaking countries. It does represent a significant milestone in French paediatric anaesthesia and surely some elements of this document can be translated into other languages and adopted throughout the world. Is it perfect though? 'No – not yet'.

Disclosure of interest

The author declares that he has no competing interest.

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