



EDITORIAL

Airways, breathing and ventilation

Throughout the world we are taught the importance of ABC – Airways, Breathing and Circulation. In this issue of Trends in Anaesthesia and Critical Care we are considering and extending the first two components and looking at ABV – Airways, Breathing and Ventilation. The importance of breathing and the presence of a patent airway have been appreciated for thousands of years. Mention is made in the Bible and many other ancient historical documents of the importance of breathing and of respiration. Management and control of the airway and breathing as we know it today though only dates back about 150 years to the roots of Anaesthesia.

In the patient who is awake and conscious, the patency of the airway is maintained by tone in the muscles of the upper airway, in particular the tongue and pharynx. When consciousness is lost or impaired, loss of muscular tone will result in closure of the pharynx and posterior displacement of the tongue. If the subject is supine, the tongue falling backwards obstructs the airway, a situation which is fatal unless managed correctly. Many techniques and devices for managing the airway in the unconscious patient have been described over the years. Indeed, airway control has been central to the practice of Anaesthesia since the first descriptions of Anaesthesia.

Management of the airway is not confined to the anaesthetist although they are usually regarded as the experts. In the A&E department patients may arrive with an impaired level of consciousness or may lose consciousness while in the A&E department. Historically the anaesthetist was called urgently. We are now seeing an expansion in the role of the A&E physician where they are undergoing specific training in airway management allowing them to be called on to provide such skills in A&E.¹ Indeed, airway management may start earlier than this and many paramedics are also trained in basic airway management and some also in tracheal intubation. Like any skill, control of the airway should only be performed by an individual with appropriate, accredited and up-to-date training and knowledge. Any skill will degrade with time and it is essential that an emergency physician keep practicing so as to remain fully competent.

The NAP4 study has been a most important piece of work. It took a look at airway management practices throughout the UK and in particular in the operating room, the A&E department and ICU. The safest place was the operating room.² With the increased emphasis on airway management for the emergency physician and intensivist will this change? The challenge to the profession now is to fully assimilate the findings of NAP4 and use them to improve our practice.

The laryngeal mask (LM) has been one of the most important advances in airway management ever. It is interesting to reflect as to whether Archie Brain might have realised this when he was developing the first prototypes. A number of alternative supraglottic devices have appeared since, some of which have found their way into clinical practice. Although the LM was originally developed as a replacement for the facemask, it has steadily become more widely used and now many anaesthetists use it as a replacement for the tracheal tube for controlled ventilation. Some have gone further and started to use it in situations where there are difficult airways, airway surgery and when the patient is in alternative positions on the operating table. In this issue López et al examine its use in patients who are placed in positions other than supine.³ It is necessary to have 100% faith in your technique with the LM to use it in the prone patient but it does work.

Once the airway is secure the patient may breathe spontaneously or be subject to supported or controlled ventilation. Dresse et al⁴ give an excellent and comprehensive account of matters which concern us regarding the pathophysiology and clinical implications of controlled ventilation. Positive end expiratory pressure (PEEP) has been the subject of much controversy over the years. We have seen all levels from zero-PEEP to macro-PEEP. Atelectasis in the early postoperative period has always been a problem but one that was not recognised as to its importance until relatively recently. More than 90% of patients may have some degree of atelectasis in the early postoperative period. How important is it; can we prevent it using PEEP; what should we be doing in the operating room and why? Read the article by Hedenstierna and his group in this issue.⁵

Finally in this issue we move away from airways to evidence. How does evidence translate to management? Some insight is provided into the evidence surrounding three important areas of our practice – volume resuscitation and colloids, transfusion and awareness. For this purpose major publications in the field of Anaesthesia during 2011 are examined for these three areas.⁶ Although only a one-year snapshot is provided, the reader will find much food for thought in these important areas. We hope that you enjoy this issue of TACC. We have certainly enjoyed preparing it.

References

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Brian J Pollard*

University of Manchester, Manchester Medical School, University of Manchester, Oxford Road, Manchester M13 9PL, United Kingdom

* Department of Anaesthesia, Manchester Royal Infirmary
University, Oxford Road, Manchester M13 9WL, United Kingdom.
Tel.: +44 161 276 8650; fax: +44 161 273 5685.
E-mail address: brian.pollard@manchester.ac.uk