

Atlas of Airway Management: Techniques and Tools. Steven L Orebaugh MD. Philadelphia: Wolters Kluwer/Lippincott Williams & Wilkins. 2007. Hard cover, illustrated, 216 pages, \$79.95.

Appropriate airway management commands a position of importance in the fields of respiratory care and anesthesia; it is a fundamental skill that we're involved with daily. The reported incidence of the difficult or failed airway in anesthesia is 0.4–4%. Failure to properly manage the airway (ie, inadequate ventilation, esophageal intubation, difficult endotracheal intubation) increases morbidity and the risk of death. Adverse patient outcomes associated with respiratory events account for one third of anesthesia legal settlements. All respiratory care and anesthesia practitioners must have a prelearned and predetermined strategy for dealing with the challenging airway in the context of anesthesia and intensive care.

Several books have been published to assist practitioners in honing airway management skills. Some books are intended for beginners, and some are for the more advanced practitioner. **Atlas of Airway Management: Techniques and Tools** is a good starter book—one that is really a pocket guidebook offered in a full-size book. The strength of this atlas lies in the numerous photographs and the visual component for instruction. There are nearly 300 author-contributed images, many of which are cross-sectional cadaver photographs of the upper airway and illustrate the various airway devices.

The book has 10 parts. When appropriate, the author adheres to a concise, standardized format to allow for consistency between chapters. Part I introduces the basics of routine airway management. Chapters in this section address upper-airway anatomy, mask ventilation techniques, direct laryngoscopy techniques, uniqueness of the pediatric airway, confirmation of endotracheal tube placement, blade types for direct laryngoscopy, and pharmacologic considerations in airway management. Good fundamental information and solid step-by-step detail is concisely presented in each chapter.

The chapter on direct laryngoscopy outlines preprocedure preparation. Pre-induction airway assessment is not identified as part of the routine. With all patients, pre-procedural airway assessment should be

conducted, when possible, prior to initiating airway management. Failure to incorporate airway assessment into our routine care can cause morbidity and mortality. I noticed a couple of lapses in the editing in this section. In the pediatric airway chapter, the legend for Figure 4.2 lists a child model as being 6 years of age, whereas 2 pages later, in a figure that must have been from the same photographic session, the child is listed as 7 years of age. Table 7.3, on airway-management pharmacology, lists the time of onset for mivacurium (manufacturing of which has been discontinued) and vecuroonium as 2–2.5 seconds and 2.5–3 seconds, respectively. The time unit should have been minutes, not seconds.

The application of references at the ends of the chapters in this section seems to be a work in progress. Each chapter uses a different citation format. My random check of references in the first section chapters found several errors, including author-name misspelling, incorrect authors cited, incorrect volume numbers, incorrect pagination, and incomplete title.

Part II looks at difficult-airway management and includes chapters on the definition, incidence, predictors, decision making, and examples and illustrations of conditions that predispose to difficult airway. Chapter 10 makes the only (and brief) mention of a new type of optical device: the video-laryngoscope. One such apparatus, the GlideScope, has proven to be key in my difficult-airway armamentarium and merits mention. This GlideScope incorporates a video camera in the undersurface of its curved plastic blade, which provides an airway image on an integrated monitor. As with all the various techniques described in the **Atlas of Airway Management: Techniques and Tools**, prior training and appropriate clinical skill that comes from experience with the equipment are key to successful use of the GlideScope.

The remainder of the book explores in more detail specific airway-management techniques: adjuncts to direct laryngoscopy (mirrors and mirror blades, prisms and prism blades, bougies and airway stylets); blind intubation (blind nasotracheal intubation, blind orotracheal intubation); light-wands and optical stylets (lightwands, optical stylets); retrograde techniques (retrograde intubation); fiberoptic techniques (flexible fiberoptic bronchoscopes, rigid fiberoptic

scopes); emergency ventilation (esophageal-tracheal Combitube, laryngeal mask airway, intubating laryngeal mask airway, new supraglottic ventilation devices, transtracheal jet ventilation); combination techniques (intubation via laryngeal mask airway or intubation laryngeal mask airway with a bougie, lighted stylet, or optical stylet, retrograde intubation, and flexible fiberoptic bronchoscope intubation, flexible fiberoptic bronchoscope intubation through the laryngeal mask airway, flexible fiberoptic bronchoscope intubation through the intubating laryngeal mask airway, flexible fiberoptic bronchoscope intubation and the esophageal-tracheal Combitube); and emergency surgical airways (cricothyrotomy, wire-guided cricothyrotomy).

I found the chapters on combination techniques (Part IX) a strength of this text, because these are seldom-described difficult-airway approaches. A couple of combination approaches to securing the airway could be added to this section: fiberoptic bronchoscope intubation and the GlideScope, where the Glidescope replaces the jaw thrust or MacIntosh blade to improve visualization; and retrograde intubation and the esophageal-tracheal Combitube.

This atlas is directed toward practitioners involved in hands-on airway management. Though anesthesia providers are frequently exposed to the equipment and techniques in this atlas, I think the book will be very appropriate for respiratory therapists who deal with securing the airway, whether in the intensive care unit or emergency department. For the more advanced airway practitioner, 2 excellent texts that offer more detailed knowledge are *Management of the Difficult and Failed Airway*, edited by Hung and Murphy (McGraw Hill Medical, 2008), and *Airway Management: Principles and Practice*, 2nd edition, edited by Hagberg and Benumof (Philadelphia: Mosby Elsevier, 2007). To enhance your technical skills in airway management, **Atlas of Airway Management: Techniques and Tools** will serve as a good reference.

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The author reports no conflicts of interest related to the content of this book review.