

lence of certain causative organisms in different countries. For example, *Legionella* pneumonia is rarely found in South America. These chapters, along with the chapter on ventilator-associated pneumonia, will be of particular interest to most respiratory therapists. They are well written, abundantly referenced, and clinically relevant.

The chapters on diagnostic procedures focus mainly on diagnosing pneumonia via fiberoptic bronchoscopy and open-lung biopsy. These chapters may be useful to readers not familiar with these procedures, although I found them to be too succinct, and the references cited are a bit dated. These chapters also would have benefited from figures and flow diagrams to help clinicians diagnose severe pneumonia.

Other chapters include discussions on pulmonary conditions commonly associated with sepsis. The chapter on acquired immune deficiency syndrome is very well written and comprehensive, but, again, it is a bit dated. For example, references to studies published in 1998 and 1999 are referred to as "recent."

The chapter on sepsis and exacerbation of chronic obstructive pulmonary disease (COPD), with 250 references, stands out as an excellent review of the topic. Comprehensive and easy to read, this chapter covers the pathophysiology, clinical manifestations, and available therapies for COPD exacerbation. Among the pharmacologic interventions discussed are bronchodilators, corticosteroids, and antibiotics. There are sections on hemodynamic support, physiotherapy, and nutrition, and the detailed discussion on mechanical ventilatory support incorporates the most recent advances. I strongly recommend this chapter to anyone who wishes to learn more about the subject or as a solid springboard for further study on the causes and treatment of COPD exacerbation.

Similarly, the chapter on acute respiratory distress syndrome provides an excellent review of current thinking regarding its pathophysiology and treatment. Of particular interest is the discussion on mechanical ventilation in acute respiratory distress syndrome, protective lung strategies, and positive end-expiratory pressure.

The chapter on management of pleural effusions and sepsis appears to be an afterthought, but it may appeal to those not familiar with the subject. I found the sections on video-assisted thoracoscopic surgery and decortication interesting and informative.

In summary, this book is more than a treatise on sepsis and septic shock; it is a digestible compendium on the causes and treatment of respiratory conditions in critically ill individuals. Perhaps the title was chosen to attract a wider audience. In my opinion, however, that was not necessary, as the book holds its own as a reader-friendly review of the causes and treatment of acute respiratory failure.

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**Percutaneous Tracheostomy: A Practical Handbook.** Henry GW Paw BPharm MRPharmS MBBS and Andrew R Bodenham MBBS. Cambridge, United Kingdom: Cambridge University Press. 2004. Hard cover, illustrated, 158 pages, \$80.

Since the advent of modern critical care, critically ill patients have experienced better outcomes. Without a doubt, more patients have survived despite suffering from multiple comorbidities. Airway management in particular is a critical issue when caring for such patients. Whether for long-term assisted ventilation or out of concern for incompetent-airway protection, tracheostomy is the unavoidable procedure. In critical care medicine we occasionally confront the consequences of complications in open surgical tracheostomy. With percutaneous dilational tracheostomy (PDT), we now have a viable alternative. Much has been written on the advantages and disadvantages of surgical tracheostomy and PDT, but little information about the practice of PDT has been available in reference books. This changes with the publication of **Percutaneous Tracheostomy: A Practical Handbook**.

This hard-cover textbook is the first to "provide the newcomer and the experienced practitioner alike with a perfect introduction to this increasingly widely used technique." Do not be confused by the name "percutaneous tracheostomy"; the book primarily describes PDT in contrast with surgical tracheostomy, and the authors use "percutaneous tracheostomy" interchangeably with "PDT."

The authors strictly follow their aim in providing a balanced overview of PDT. No matter what level of experience you have with the procedure and management of tracheostomy, this is a book deserving of your time. To see is to believe. It is amazing to see the 95 figures and/or pictures in this 143-page text. The easy-to-use format is feasible because the book's design uses different colors for each chapter on the upper margins for easy look-up from the table of contents. The flow of the text is fluent and well-organized, although there is some redundancy of contents in some chapters. Being a practical handbook, you can sense that the authors explicitly share their experience heartily.

Chapter 1 chronicles the history of tracheostomy. There is a concise overview, beginning with the first recorded case, in ancient Egypt around 3,000 BC, up to the development of modern PDT. Only after Toys and Weinstein used a Seldinger guidewire for the procedure did percutaneous tracheostomy take a vital step forward. The first percutaneous progressive dilational technique was developed by Pasquale Ciaglia and reported in June 1985. It is now performed in 75% of intensive care units in England and Wales.

Chapter 2 briefly summarizes the neck anatomy related to tracheostomy. Sometimes it is avascular in the midline of the neck, but remember that it is not always the case. In patients with tracheal intubation, the position of the endotracheal tube tip usually changes with extension of the neck. The authors mention the same phenomenon with the trachea position differing among youth and the elderly, based on cervical extensions and flexions, so one must be cautious when determining the tracheostomy incision site.

Chapter 3 focuses on the complications of translaryngeal intubation and indications for tracheostomy. No randomized controlled trial has specified the optimal timing for tracheostomy in critically ill patients. As the authors describe, tracheostomy timing should be made on a case-by-case basis. Interestingly, they point out the trend of earlier tracheostomy after the advent of PDT. Whether there is an increasing number of avoidable, unnecessary procedures needs to be closely monitored.

Chapter 4 briefly summarizes contraindications to tracheostomy. The authors' mention of the emergency use of percutaneous tracheostomy is particularly notable.

Sometimes surgical tracheostomy is needed as a rescue procedure. The safety and availability of PDT in that situation are not so convincing in current practice.

Chapters 5 and 6 compare the differences among translaryngeal intubation, PDT, and open surgical tracheostomy. It is not uncommon for a patient to have terrible complications with long-term translaryngeal intubation, such as periodontitis, mucus plugging in the endotracheal tube, and vocal-cord granuloma. Tracheostomy can reduce dead space and airway resistance and ease ventilator weaning. The authors provide a balanced view of the benefits and detriments of these airway-management techniques. Chapter 6 includes tables that summarize the complications of PDT versus surgical tracheostomy.

Chapter 7 concisely but comprehensively covers current PDT techniques. The colorful pictures illustrate the various commercial kits available in the marketplace, including the Ciaglia sequential dilator kit, the PercuQuick sequential dilator kit, and the Blue Rhino kit. An in-depth reading is recommended to fully appreciate the various approaches to PDT.

Chapter 8 focuses on the tracheostomy tube. The information on design features and choices is the same as those in widely available tracheostomy textbooks.

If you are a newcomer to the practice of PDT, you must not miss Chapter 9's discussion of practical considerations of anesthesia and surgical techniques. The authors describe step-by-step surgical techniques. One of my favorite figures is Figure 9.5, which details the steps in the dilation sequence and includes bronchoscopic views. There are potential risks in the misplacement of the needle and guidewire during PDT.

Chapter 10 discusses equipment used to avoid and solve certain problems and ensure safety and accuracy in PDT. Equipment choices include bronchoscopy, ultrasound, and capnography. Bronchoscopy in particular is invaluable, because it can transilluminate the trachea, verify accurate placement of the needle and guidewire, and is a very good teaching aid. Bronchoscopy during PDT is now common practice, with its use increasing from 30% in 1998 to 81% in 2002.

Chapter 11 addresses complications specific to PDT, including needle damage to the bronchoscope, hypoxia, and hypercapnia. The authors state that there is a misconception about the bleeding complication. They point out that "it is wrong to always consider an open procedure to be the safest option. . . It may be better to perform an ultrasound-guided percutaneous procedure with minimal dissection in a controlled en-

vironment." Experienced operators can achieve a lower incidence of bleeding complications with PDT than with surgical tracheostomy.

Chapter 12 covers the complete care of tracheostomized patients, including aftercare, decannulation, and follow-up after discharge from the intensive care unit. Be especially cautious if the patients might be going to a unit where the staff are not familiar with tracheostomy care, which can lead to life-threatening events.

Chapter 13 offers PDT tips and tricks. I found this the most precious information the authors shared, reflecting their decades of experience in this field.

With PDT well beyond its infancy and, indeed, gaining popularity in contemporary critical care, I am delighted to see a book regarding its evolution, techniques, and management. In an easy-to-follow, general outline format, this book uses well-illustrated figures and pictures to introduce PDT. The authors have achieved their main goal, by providing "a balanced overview of techniques without getting overwhelmed with detail."

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