

Book report

Core Topics in Mechanical Ventilation

Lluís Blanch

Critical Care Center, CIBER Enfermedades Respiratorias, Corporació Parc Taulí, Universitat Autònoma de Barcelona, 08208 Sabadell, Spain

Corresponding author: Lluís Blanch, lblanch@tauli.cat

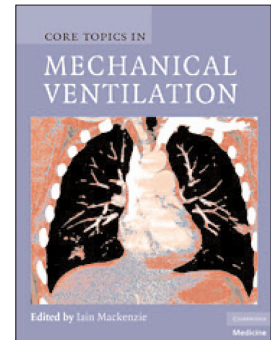
Published: 3 August 2009

Critical Care 2009, **13**:308 (doi:10.1186/cc7951)

This article is online at <http://ccforum.com/content/13/4/308>

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Ian Mackenzie: *Core Topics in Mechanical Ventilation*. Cambridge, UK: Cambridge University Press, 2009, 440pp., ISBN-13: 9780521867818



Mechanical ventilation and weaning comprise one of the most common treatment options to sustain lung function in critically ill patients. Currently, professionals caring for the critically ill know that appropriate management of these patients and ventilator set up is of paramount importance to improve outcome without causing further lung and distant organ injury. This book offers an overview of the physiological and clinical bases for caring for patients receiving mechanical ventilation.

The contents of *Core Topics in Mechanical Ventilation* edited by Ian Mackenzie can be separated into two general parts. Several chapters cover general respiratory physiology, which is essential to understand how mechanical ventilation works and interacts with cardio-respiratory performance. It is worth mentioning the good contributions on the physiology of gas exchange, carbon dioxide balance and cardio-respiratory interactions. Some chapters are dedicated to adjuncts of mechanical ventilation, including both general and custom adjuncts used in mechanically ventilated patients. Of note are the chapters dedicated to the effects and administration of oxygen and heliox, and to sedation, analgesia, paralysis and nutrition.

The second part is devoted to mechanical ventilation. The reader can find recommendations about how to set the ventilator in several clinical scenarios such as asthma, chronic obstructive pulmonary disease, and chest, burn and blast injuries. One specific chapter is devoted to adverse effects and complications of mechanical ventilation. This chapter deals in a very comprehensive manner with management of the difficult airway, unplanned extubation and how to minimize and manage ventilation-induced lung injury (barotrauma, volutrauma, and atelectrauma), among others. The management of acute lung injury and acute respiratory distress syndrome are not covered in dedicated chapters, but major principles are included as paragraphs in distinct parts of the

book. The same is the case for non-invasive mechanical ventilation, which nowadays can be considered an independent discipline that extends beyond anesthesia and intensive care departments. Three chapters deserve mention for their particular relevance: Management of the artificial airway, Modes of mechanical ventilation, and Mechanical ventilation for transport. These chapters are extensive and comprehensive and include technical documentation as well as tables and figures that are self-explanatory. I am also particularly pleased with the historical section of the book. However, the coverage of topics such as epidemiology, chest, lung or abdominal mechanics, patient-ventilator interactions and asynchronies, and final options available for treating acute respiratory distress syndrome is not extensive. The organization of the chapters is rather heterogeneous and references are scarce in some chapters.

In summary, *Core Topics in Mechanical Ventilation* is addressed to and to be read by physicians, nurses and therapists, and especially intensivists, pulmonologists, and anesthesiologists who take care of patients with acute lung injury needing mechanical ventilation. The contents are also useful for those professionals who have an interest in the pathophysiology of acute lung injury. The contributors to the book have diverse backgrounds and are all experts in their respective fields.

Competing interests

The author declares that they have no competing interests.