

Cambridge University Press

978-0-521-65410-4 - Acute Respiratory Distress Syndrome: A Comprehensive Clinical Approach

Edited by James A. Russell and Keith R. Walley

Frontmatter

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## Acute Respiratory Distress Syndrome

Acute respiratory distress syndrome is the most lethal form of acute respiratory failure and presents one of the greatest challenges in critical care medicine. Despite its severity and complexity, however, few texts exist that provide a detailed review of how to care for patients who have ARDS. Drs. Russell and Walley have enlisted an expert team of contributors to provide not only the essentials of diagnosis, assessment, and management; they have also taken care to provide just enough pathophysiology to illustrate clearly the science behind the clinical approach.

After giving the history and epidemiology of ARDS, the authors present the essential basic science underlying the causes of this syndrome and explain how to manage patients in its acute and later stages. The thorough clinical portions of the book clearly explain such treatment and management issues as mechanical ventilation and weaning, resolution and repair of lung injury, pneumonia, multiple system organ failure, and cardiovascular and pulmonary physiology and monitoring. An extensive chapter on clinical assessment and total patient care demonstrates the importance of total patient care in ARDS. Superb tables and figures help to make this chapter, and indeed the entire book, indispensable to intensivists, pulmonologists, internists, anesthesiologists, surgeons, and critical care nurses.

Thoroughly referenced and up to date, *Acute Respiratory Distress Syndrome: A Comprehensive Clinical Approach* is the definitive source of information for any physician who treats patients with ARDS.

Dr. James Russell is a practicing intensivist and chair of the Department of Medicine at St. Paul's Hospital, a tertiary teaching hospital of the University of British Columbia. He has twenty years of experience managing critically ill patients in both the United States and Canada and has researched, lectured, and written about ARDS extensively.

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KEITH R. WALLEY



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*For Betty and Russ for their love, support, and vision for me;  
For my daughters Francey and Allie for their fun and love,  
And for Frances, the woman of my dreams, for her love, laughter,  
and zest for life.*

– JAMES RUSSELL

*To Pat and our children for their love and for keeping the really important  
things in focus.*

– KEITH WALLEY

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# Preface

Acute respiratory distress syndrome (ARDS) is an important problem in critical care medicine because ARDS care is expensive, ARDS commonly affects young, previously healthy individuals, management is complex, and mortality is high. Indeed, management of the unstable, profoundly hypoxemic patient who has ARDS is one of the most challenging and potentially rewarding clinical scenarios we face in critical care medicine.

There are suggestions that the mortality of ARDS may be decreasing, yet large trials of innovative therapies continue to seek further improvements in outcome. It is not clear why mortality of ARDS may be decreasing, but some have proposed that comprehensive, organized intensive care is the reason.

We identified a great need for a comprehensive, clinically oriented handbook on ARDS to assist clinicians who manage patients with ARDS. We recognized that sound understanding of the pathophysiology and epidemiology of ARDS leads to improved clinical management. Furthermore, we have been stimulated by the challenge of balancing multiple competing aspects of our patients' physiology when managing our own patients who have ARDS. So we decided to write and edit this textbook on ARDS for a clinical audience of students, residents, and attending physicians in critical care, respiratory medicine, anesthesiology, internal medicine, and surgery.

Why do we think this book will be a useful addition to your textbook collection? First, we are extremely proud of the outstanding group of internationally recognized authors who have written lucid chapters covering topics in their areas of expertise. Second, we have emphasized a sound understanding of epidemiology, molecular mechanisms, and whole organ pathophysiology as the basis for clinical care. To provide continuity, we edited the text so it provides a clinical perspective that will make it valuable and useful at the bedside in the ICU as well as in the office and library. Lastly, we both love the challenges and rewards of successfully resuscitating the profoundly unstable, hypoxemic patient who has ARDS, and we hope this book helps you enjoy this clinical challenge as well.