An unusual and enjoyable feature of this book is the editor's comments preceding each chapter, giving an insight into the author's experience on the subject. This series, designed to "show and tell" practical aspects of anesthesia, may well fill a gap that has been apparent for some time to clinical anesthesiologists.

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Critical Care: The Fortieth Hahnemann Symposium. Edited by W. W. Oaks, K. Bharadwaja, and D. A. Major. New York, Grune and Stratton, 1978. Pages: 336. Price: $29.75.

As stated in the preface, the purpose of this symposium is to "be helpful in updating our knowledge of the best methods of handling critically ill patients." It is true that there have been major advances in critical care medicine within the last few years. Unfortunately, this book ignores most of them. Ventilation of the critically ill patient has changed radically with the introduction of high levels of positive end-expiratory pressure and intermittent mandatory ventilation. There has been much controversy over crystalloid versus colloid fluid administration to patients in respiratory failure. The only chapter in this symposium on respiratory disease concerns itself with well-described tests of respiratory function and does not address these newer, more controversial topics. In the cardiovascular field, new vasodilators such as intravenously administered nitroglycerin, phentolamine and nitroprusside and new vasopressors such as dopamine and dobutamine are being used to support the critically ill patient. In the chapter on septic and cardiogenic shock, there is only passing mention of these therapeutic modalities without discussion of their effects on the various organ systems involved in the shock state. There is no chapter on the pathophysiology of acute renal failure, its prevention, or its management by dialysis; nor is information about the rapidly advancing field of parenteral hyperalimentation presented. Finally, there is no discussion of advanced monitoring with flow-guided pulmonary-artery catheters or the measurement of cardiac output by dye or thermodilution.

In short, I did not find this symposium useful.

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Intensive Care Radiology: Imaging of the Critically Ill. Edited by L. R. Goodman and C. E. Putnam. St. Louis, C. V. Mosby, 1978. Pages: 363. Price: $34.50.

The goal of this book is to teach the radiologist enough critical care medicine and the intensivist enough critical care radiology to allow communication for effective use of the expanding number of radiologic techniques to aid in diagnosis and therapy of the critically ill patient. It is an admirable goal and in large measure successfully achieved.

Looking at the book from an intensivist's point of view, there are some minor deficiencies. The critical care medicine is occasionally oversimplified and controversial topics are presented without a full discussion. For example, the chapter "Life Support Techniques" presents a descending limb of the Frank-Starling curve as a simple consequence of excessive preload without a discussion of myocardial ischemia or mitral regurgitation as the cause. Acute respiratory failure in the adult is presented as a specific syndrome with a typical clinical and radiologic course contrary to the experience of many intensivists. The book also assumes some knowledge about radiologic techniques that the intensivist may not have. I would have found useful an early chapter reviewing radiologic terminology, positions and techniques of performing some of the more specialized procedures. This is left to the individual chapters, with spotty coverage resulting. The radiographs could occasionally benefit from an extra arrow highlighting the pathologic or normal anatomy for those not used to reading x-rays daily. I feel an important omission is the lack of discussion of the radiation hazards to patients or ICU personnel from the routine films or the newer radioisotope techniques.

Aside from these concerns, I thoroughly enjoyed this book. There is a large amount of well-organized and well-written information for either the intensivist or radiologist. The book is worth the price alone for the excellent collection of radiographs illustrating the myriad problems the ICU patient can encounter. It has increased my awareness of the newer radiologic techniques and my ability to discuss them with my radiologist colleagues. I recommend it strongly for anyone interested in the care of the critically ill patient.

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Recent Advances in Anaesthesia and Analgesia. Edited by C. Langton Hewer and R. S. Atkinson. Boston, Little, Brown and Company, 1976. Pages: 268. Price: $29.50.

This book consists of ten chapters contributed by ten British authors, originally written in 1975, and presented in the current series, *International Anesthesiology Clinics*, Spring 1978. Because of this lag, the book lacks the recent advances of the last three years. In general, the book reflects current British practice and therefore, it is more suitable for British than American anesthetists. The chapter on new drugs emphasizes drugs commonly used in British practice, such as althesin. Althesin is not available in the United States. The discussion of sodium nitroprusside is inadequate and superficial. The chapter on pain relief lacks diagrams and illustrations. The chapter, "Safety of Anaesthetic Apparatus," is excellent and would be helpful to all anesthesiologists. The writing is clear and concise and there is an abundance of references.

All in all, the book provides the reader with a comprehensive review of the recent advances in anesthesia until 1975. We do recommend that it be read by those preparing for the F.F.A.R.C.S. or the American Board of Anesthesiology examinations.

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Spinal Deformities and Neurological Dysfunction. Edited by S. N. Chou and E. L. Seljeskog. (Seminars in Neurological Surgery Series.) New York, Raven Press, 1978, Pages: 276. Price: $27.00.

This book is the result of a Symposium held under the auspices of the Joint Committee on Continuing Education in Neurosurgery of the AANS and the CNS and the University of Minnesota. Eleven of the 14 contributors are from the host institution. The topics covered range from embryology to surgical techniques, and each author's paper stands or falls as an isolated contribution. The book is well manufactured, illustrations are clearly reproduced, and the price is reasonable.

Certain papers stand out as particularly informative. Lutter's work on the symptoms, signs and management of achondroplasia is exceptionally thorough and informative. Cole's article on the economic and social aspects of spinal cord injury and the role of centers in the management of these tragic patients is an excellent companion-piece to the surgical papers that make up the bulk of this symposium. Gillilan's discussion of the blood supply of the spinal cord is lucid and complete. None of the other papers is below standard; each author has made a meaningful contribution.

In contrast to many symposium volumes, the subject matter of this book is sufficiently narrow that the area is well covered by the various contributors. Of course, the depths of treatment of individual problems vary, but this is a minor issue.

This book is of value for the neurosurgeon and orthopedist who deal with spine and spinal cord disease. Although similar information can be gleaned by pursuing various journal articles, the collection of data in one book is an asset. The book should be a useful addition to the clinician's library.

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Development of the Lung. EDITED BY W. A. HODSON. New York, Marcel Dekker, 1977. Pages: 646. Price: $25.00.

The series of volumes, *Lung Biology in Health and Disease*, published under the executive editorship of Claude Lenfant, has had notable success, and volume 6 of the series discussed here will prove no exception.

The lung holds a lasting fascination for those who become involved in the study of its function and structure. Few organs lend themselves to as many manipulations and measurements both *in vivo* and *in vitro*. *Development of the Lung* takes into account the triad of developmental processes, structural, biochemical and physiologic. The editor, Dr. Alan Hodson, has called up, as contributors to this volume, the combined skills of a notable group of investigators.

Part I: On structural development; considers the growth and development of the airways, the formation of the pulmonary vasculature, ultrastructural observations relating to the developing lung and finally, the development of pulmonary innervation. The chapter on development of the airways, by Edward Boyden, takes the reader through the intricacies of the changes from the embryonic period to term with wax reconstructions of bronchopulmonary segments and acini, supported by diagrams and histologic sections.

The chapter by Hislop and Reid on the formation of the pulmonary vasculature condenses the results of many years of investigation. The patterns of branching and numbers and sizes of the intrapulmonary arteries and veins during fetal life, childhood, and adulthood are derived from arteriograms, venograms and serial sections of entire pathways. The changing content of muscle in the walls of arteries and veins is discussed, as well as the effect of disease on vessel growth, and the subsequent modifications and adaptations to this disturbance.

With the pattern of airway and pulmonary vasculature development laid down, the next three chapters are devoted to ultrastructural studies of airway epithelium and submucosal gland (Jeffery and Reid), the alveolar lining and its development (Mayrick and Reid), and morphometry of the developing lung (Burri and Weibel). Two tables inform us that man and the rat hold first place with respect to epithelial cell types (10 and 11, respectively); the cat, with respect to goblet cells and glands. Numerous fine electron micrographs describe the characteristics of these cells in concert with the progression of pulmonary development. It is reported that 95 per cent of the alveolus is covered by Type I pneumocytes and 5 per cent of Type II pneumocytes. The accrued data bearing on the source of pulmonary surfactant are particularly informative about the role of the Type II pneumocyte. Towards the end of the chapter, perinatal pulmonary disease is discussed, along with alveolar developmental anomalies. Chapter 5 describes the ultrastructure of the developing lung and what has become the *sine qua non* of lung-structure studies, the use of the stereologic approach. Few structural studies are complete without its use, and Drs. Weibel and Burri are without question the foremost experts in this field in respect to the lung. This chapter highlights the detailed results one can expect from the proper use of morphometry. Because of the difficulty in obtaining human fetal lungs adequately preserved for ultrastructural study, the development of the air–blood barrier in fetal and postnatal lungs and the associated morphometric findings have been derived from studies of lungs from the rat. Correlative information about human and other mammalian lungs is included wherever available. Of particular interest is the information relating to cell kinetics of lung growth.

The last chapter of Part I, by Loosli and Hung, concerns the development of pulmonary innervation. A singular event has been the demonstration of nerve endings in the alveolar wall interstitial tissue of the mouse and, in particular, their apparent association with Type II pneumocytes.

Part II: Chapter 7, by Farrell and Morgan, discusses lecithin biosynthesis in the developing lung. The authors review the synthesis of fatty acids and concepts of metabolic regulation and the role of enzymes and substrates in this regulation, pointing out areas where the answers are partially known or unknown as for instance, how is the synthesis of surface-active lecithin controlled? The answer may lie in the realm of isolated cell culture technology.

In the next chapter, Clements and Tooley consider the kinetics of surface-active material in the fetal lung and the movement of this material following accumulation during gestation, secretion into alveolar air space, and movement out of the lung into the amniotic fluid. The pitfalls associated with the assay of pulmonary surfactant are reviewed. Some of the most intriguing aspect of pulmonary surfactant, which are not known precisely, are the mechanisms responsible for its secretion, its removal from the lung into the amniotic fluid, and the timing of these sequences. It is likely that immunologic assays of surfactant will play a greater role in these deliberations than hitherto.

The biochemistry of connective tissue development (Chapter 9, Frangblau, Hayes, and Snider) primarily describes the current state of the art since much of the previous work in this area has been dealt with in Volume 2, *The Biochemical Basis of Pulmonary Function*.

The regulation of pulmonary alveolar development in late gestation and the perinatal period is discussed by Taeusch and Avery in Chapter 10. In the next chapter, Ballard discusses glucocorticoid receptors in the fetal lung, the affinity of steroids