

Book Reviews

Immunologic Aspects of Anesthetic and Surgical Practice. EDITED BY ALIX MATHIEU AND BARRY D. KAHAN. New York, Grune and Stratton, Inc., 1975. Pages: 400. Price: \$29.00.

Drs. Mathieu and Kahan are to be congratulated for publishing the first text relating the fields of anesthesiology and immunology. Although articles describing the effects of anesthesia on immune phenomena were published as early as 1904, only in the past ten years has this subject received serious consideration. It is now apparent that surgery and anesthesia are not innocuous from an immunologic standpoint and that the anesthesiologist must have an increased awareness of the patient's immunologic responses to infection, cancer, drugs, blood transfusion, and transplanted organs.

The book contains 17 chapters primarily written by young American investigators in anesthesia, surgery, and internal medicine. It is divided into two parts. The first is an introduction to immunology covering cell-mediated immunity, lymphocyte transformation, humoral immunity, and the effects of surgery and anesthesia on general immunity. The second is a discussion of specific clinical subjects, such as viral hepatitis, postanesthetic hepatitis, drug allergy, asthma, blood transfusion, and organ transplantation. In the preface, the editors state a desire to "present fundamental immunologic concepts and to illustrate their implication for clinical practice in a readily understandable fashion." Part II of the book fulfills that objective. It is easy to read, understandable and clinically relevant for the anesthesiologist. The same cannot be said about Part I. From reading Part I, it is unclear to what audience the book is directed. Ostensibly, the book is designed as a primer in immunology for anesthesiologists. However, the first few chapters are complex and overly detailed. This is exemplified on page 4 of Chapter 1 where, without prior definition, the reader is presented with immunologic jargon such as "alloantigens," "HL-A phenotypes," and "haplotypes." The early chapters are well written, and they contain a wealth of information, but they do not present a clear overview of the immune response that can be readily understood by the non-immunologist. A clearer understanding of the immune response could have been accomplished by a more careful definition of terms and by more extensive use of diagrams such as those in a similar text by Alexander and Good, *Immunobiology for Surgeons* (W. B. Saunders Co., 1970).

As frequently occurs when many authors are involved, the book tends to be a collection of independent papers rather than a cohesive unit. Many subjects are discussed in more than one chapter; there are major differences in writing style, excessive emphasis is placed on a few topics (for example, hepatitis) and too little emphasis is placed on others

(for example, anesthetic effects on the immune response). When writing a book, there is an unavoidable delay between preparation of the initial manuscript and final publication. As a result, some of the material is outdated and a moderate amount of new information is omitted. This is particularly evident in those chapters dealing with the effects of anesthesia and surgery on general immunity and infection. The references following each chapter are basically good; however, there is great variation in the quantities (220 in Chapter 4, 18 in Chapter 9), and "unpublished observations" are frequently included.

Overall, this book is a worthy undertaking that has three major attributes. First, it is educational; it contains recent information about immunology that will make the anesthesiologist a more knowledgeable general physician. Second, the book emphasizes the need for anesthesiologists to consider the influence of anesthesia on immune function. This is true whether one is concerned with the effects of anesthetic drugs on the patient's immune defenses, or whether he is caring for a patient who has an immunologic disorder. Third, the book demonstrates that our understanding of the interaction between anesthesia and the immune response is relatively limited and that many questions remain to be answered. Hopefully, this book will stimulate increased interest in the subject.

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Progress in Anesthesiology. Volume 1. Molecular Mechanisms of Anesthesia. EDITED BY B. RAYMOND FINK. New York, Raven Press, 1975. Pages: 652. Price: \$35.00.

This volume records the proceedings of a three-day multidisciplinary international symposium sponsored by the Department of Anesthesiology, University of Washington. Recent advances in elucidating mechanisms of anesthetic actions on a variety of biological systems are documented here as reviews or as research papers. The scope is rather wide, including not only the current concepts and theories of how anesthetics might act to induce unconsciousness (at molecular levels); actions of local anesthetics; effects of general anesthetics on metabolism, enzymes, cyclic AMP system, putative neurotransmitters, and finally, on myocardial contractility are also considered. This book is therefore different from that edited by M. J. Halsey *et al.*, bearing a similar title, published in England in 1974.

This reviewer has been treated to a wealth of information. Experimental models varied from lipid membranes, mitochondria, reconstituted myofibrils,