Book Reviews

Anesthesia, Second Edition

Ronald D. Miller (ed.) New York, Churchill-Livingstone, 1986. (Academic Press Canada, Don Mills) 3 Volumes. Price \$208.80

The review in this Journal of the first edition of Miller's textbook concluded "in the future it will be the yardstick by which other textbooks will be measured" (John P. Cain, *Can Anaesth Soc J*, 1982; 29: 408). As good as the first edition appeared, the second edition has improved immensely. The lack of sufficient detail in many areas of the basic sciences and internal medicine has been largely corrected. There is now a separate section on the scientific foundations of anaesthesia which includes very good chapters dealing with pharmacology, physics and anaesthetic breathing systems. Chapters on hepatic, renal and neuromuscular physiology are welcome. Similarly, there are new chapters to discuss dysrhythmias, renal failure, liver impairment and many aspects of anaesthesia and critical care medicine that were largely omitted in the previous edition.

It is refreshing to see the inclusion of chapters on the history of anaesthesia, the legal aspects of anaesthesia, and computers in anaesthesia. In general, the chapters are very readable, contain very few typographical errors, and are well organized and referenced. Although many of the chapters are new or extensively rewritten, some are changed very little from the first edition. The section dealing with specific applications of clinical anaesthesia is somewhat improved but in many instances still reads like a "how to" manual of anaesthesia, with too much technical detail.

The second edition is 879 pages, 22 chapters and 38 contributing authors larger than the first. The print is also somewhat smaller and more difficult to read in this edition. Highly specialized chapters dealing with various aspects of intensive care occupy the last 300 pages of the book.

Undoubtedly, Miller's second edition is the finest and most complete textbook of anaesthesia available today. Residents and practising anaesthetists alike will be able to use it as an educational resource

and as a first reference for most routine situations. Subspecialty chapters will be of less use to most clinicians but are not detailed enough to replace specific textbooks and publications for those with highly specialized interest.

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A Practice of Anesthesia for Infants and Children

John F. Ryan, I. David Todres, Charles J. Coté, Nishan Goudsouzian (Eds.) Grune & Stratton, Orlando, Florida

"A Practice of Anesthesia for Infants and Children" is the fifth in a series from Grune & Stratton on the scientific basis for clinical anaesthesia. It is a handsome book, well bound, with excellent photographs and diagrams and extensive, up-to-date references.

The organisation and presentation of the material are well conceived and maintain a high level of quality inspite of the multiple author format.

The first 12 chapters develop the general principles and rationale for the choice of different anaesthetic techniques and agents in the premature, newborn and older child. The next eight chapters are devoted to the principles behind the choice of management for specific paediatric anaesthetic problems.

The final chapters deal with regional anaesthesia, the postoperative recovery room, paediatric equipment and procedures.

This is an excellent book, as one would expect from a well-respected paediatric centre and authors who are highly regarded in the field of paediatric anaesthesia.

I very much enjoyed the opportunity to read this book. I highly recommend it, not only to trainees in anaesthesia and the specialist anaesthetist who

occasionally anaesthetises a child, but also to those who confine their practice to paediatric anaesthesia.

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Perioperative cardiac dysfunction, Volume III

Joe R. Utley MD (Ed.) Williams & Wilkins,
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This book is a 269-page monograph on topics related to perioperative cardiac dysfunction. The chapters are well written and readable, some concise and others more detailed.

The chapters related to pathophysiology, including the determinants of cardiac function, myocardial oxygen supply and demand, the effect of afterload mismatch with effect of vasodilators and the diastolic function of the hypertrophied ventricle are supplied with excellent diagrams and numerous references.

As regards the application of technology, there are three chapters describing the use of right and left ventricular assist devices, including the indications for their use, their effect on myocardial oxygen consumption compared with the intraaortic balloon, the type of equipment available and the complications associated with the use of this technology.

The discussion on intraoperative myocardial preservation is concise but includes the blood versus crystalloid cardioplegia controversy and is followed by a detailed description of the causes and diagnosis of perioperative myocardial infarction.

Other perioperative problems discussed include coronary artery spasm, reanimation of the heart, use of inotropic drugs, dysrhythmias with particular reference to the use of atrial wires for diagnosis and treatment, use of digitalis, and postinfarct bypass surgery, all of which are presented concisely, clearly and are well illustrated.

A deficiency in this book is the chapter on anaesthetic agents and techniques with reference to cardiovascular surgery. It is too short and does not adequately cover the topic or include such items as the coronary steal effects of isoflurane.

Overall this is an excellent monograph for the cardiac anaesthetist and a good reference for the

anaesthetist who is involved with cardiac patients for non-cardiac operations.

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Anaesthesia: essays on its history

J. Rupprecht, M.J. van Lieburg, J.A. Lee, W. Erdmann (Eds.) Springer-Verlag, New York, 1985

The title of this book aptly describes its contents. It is not another account of the discovery and development of obsolete drugs and techniques but a series of more than 80 short essays on a wide variety of topics related to anaesthesia. Most relate to advances of the past 50 years and are edited papers presented at the First International Symposium on the History of Modern Anaesthesia, held in Rotterdam in the spring of 1982. The contents are organised into sections covering biographies of pioneer anaesthetists, development of techniques, progress in different countries, the world organisation of anaesthesia, and humanism in anaesthesia. Many were free papers and reflect the individual interests and thoughts of those contributors. Others are scholarly articles by senior colleagues who have lived through, and contributed so much to, the advances of modern anaesthesia. These include Sir R. MacIntosh, on the establishment of the chair of anaesthetics in Oxford; L.E. Morris, on the continuing influence of Ralph Waters on education; T. Gordh, on Waters' influence on anaesthesiology in Sweden; H. Ruben, on his own contribution to anaesthesia and resuscitation equipment; D.C. Moore, on regional anaesthesia in the United States since World War II; J.W. Dundee, on early problems in intravenous anaesthesia; P. Astrup, on the development of blood gas measurement; J.A. Lee, on three major pharmacological advances; and L. Rendell-Baker on the development of standards for anaesthesia equipment.

This book is a tribute to the organisers of the First Symposium that they have been able to record so much living history before it is too late. The contributions are not uniform in quality but each represents its author's feelings. The omission of major Canadian contributions to the advance of our

specialty reflects the absence of such a paper at the Symposium; it is hoped that this will be corrected at the Second Symposium to be held in London, England in July 1987. Nevertheless there is a wealth of information not available from other sources. Where else would one find, for example, a description of anaesthesia during the London blitz, Ruben's use of four bicycle spokes welded together to make the first self-inflating bag, or that it was, indirectly, two very unpleasant anaesthetics in his teens that led Lord Nuffield to endow the Chair of Anaesthetics in Oxford? This is a book which broadens our outlook and brings us into personal contact with many of those who have led our specialty to its present state of excellence. It is highly recommended both for department libraries and individual anaesthetists.

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Anaesthetic management: a rule-based guide

M.J. Harrison, R.M. Jones, B.J. Pollard, Butterworth Publishers, 1986. 29.95 (US)

This book is intended as a portable guide to managing anaesthetic-related problems. It arose as an off-shoot of a computer program which was designed to provide suggestions for the best management in a given clinical situation. The book consists of a series of 31 flow charts. Each path makes appropriate reference to the book's up-to-date and common-sense rule section. The rule section provides a synopsis of appropriate management for the situation at hand.

The limitation of the approach, in practice, is the fact that a computer is much quicker at sorting through flow charts than an individual fingering along the pages of this book. In fact, each anaesthetist already carries his own built-in computer (brain). The database (basic information) with which the anaesthetist works is the reading and training provided during the residency period and subsequently.

Although I feel that the practical application of this book is limited, I would congratulate the

authors on their admirable attempt to introduce logic to the human computer (brain). The completeness and logical composition of the flow charts could provide a useful framework for classifying anaesthetically related clinical problems. As such, though probably not warranted for the individual, this book would be a valuable acquisition for a departmental library.

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Microcomputers in critical care: a practical approach

J. Michael Dean, Frank V. McLean Booth, Williams & Wilkins, Baltimore, 1985 \$32.50 (US)

From the title, medical and nursing professionals might think this book would provide an overview of the applications of microcomputers in ICU's and an approach to acquiring such systems. This book does not, however, deliver this type of information. Instead it is a chatty computer literacy book with many sample programs for the ICU which the authors have developed on an Apple computer.

The preface states that the authors are doctors who are computer hobbyists, and a reader should be aware that the content of the book is indeed presented from that viewpoint. The authors undoubtedly learned the hard way that software is more important than hardware, good software is expensive if one is going to develop it from scratch, and that no one protects the user's interests except the user. This type of common sense advice is scattered throughout the book and will help readers develop a healthy skepticism in dealing with vendors.

The major limitation of this book is its simplified view of the ICU environment. The authors do not deal with important hospital issues such as cost justification of ICU computer systems, interfacing ICU systems to hospital labs, pharmacy, and A/D/T systems, staff training to use computers, and evaluating off-the-shelf software. An inappropriate emphasis is placed on programming which would lead physicians to believe they must learn to program in order to use a computer. In fact, good programming takes a lot of experience. It would be better to help

ICU professionals understand the power of software tools such as database packages and fourth generation languages (4GL's) so they don't have to waste their time learning to program.

Despite the numerous program examples the book also does not include common critical care applications such as CAI (computer-aided instruction), signal analysis (analog-to-digital conversion) and drug interaction software. Also, although a glossary is useful in a book of this type, some of the definitions are not accurate and could be confusing to the novice e.g., "real time – time of the real world ... if a computer does something at noon every day, it must know the real time".

This book could not be recommended as a "practical approach" to microcomputers in critical care, but could serve as an introduction to computers for those working in an ICU.

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Decision making in critical care

Hillary Don, MD B. C. Decker Inc., Burlington, Ontario (Mosby Times Mirror, Scarborough, Ontario) \$54.50

This 205-page hard cover volume is the most recent addition to the Clinical Decision Making series produced by the same publisher.

The author lists 196 emergent and semi-emergent situations, most of which are commonly encountered in the Intensive Care Unit or the Emergency Room. Headings are separated by organ system and are presented in a two page format with a one page decision tree and an informative one page text.

Topics are relevant and the range is fairly comprehensive. The decision trees and complementary text with a few exceptions are clear and well referenced. A few of the decision trees skip obvious steps such as the approach to the patient on intermittent positive pressure ventilation with suddenly elevated peak respiratory pressures and hypoxaemia. Here there is no mention of immediately increasing the FiO_2 or manual ventilating while trouble-shooting the ventilator circuit. A few of the decision trees, such as Cardiac Arrest Part 2 already require some revision. Overall the book is well

written and achieves its objectives as a quick reference for the inexperienced physician facing a potentially life-threatening situation. This book should be particularly useful for the junior resident attached to an intensive care unit, emergency room officers and physicians with part time clinical responsibilities and limited formal training in critical care or emergency medicine.

Acceptance of this book would probably be greater if the format were changed to a soft cover pocket sized volume. Frequent updating will be required to maintain its relevance and encourage widespread use.

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Erratum

Re: Milne B, Cervenka FW, Henderson MB, Westra PJ. Transducer offset by electrocautery resulting in erroneous blood pressure measurement. Can Anaesth Soc J Vol 33, March 1986. Pages 234-6.

Page 236: "At 10 volts the offset was . . ." should read

"At 100 volts the offset was . . ."