

Book Reviews

Capnography in Clinical Practice

Gravenstein JS, Paulus DA, Hayes TJ. Butterworths, Boston, 1988. pp 158. ISBN 0-409-90135-0. \$21.95 us

The concept has been put forward that routine monitoring of carbon dioxide levels in respired gases can significantly improve patient safety in the operating room and other critical care areas. Consequently the Anesthesia Patient Safety Foundation promoted the production of this book and also a video tape in order to provide education in the use of "capnography" and "capnometry."

There are three main sections in the book. The first "Clinical Perspectives on Capnography" gives an account of the way in which these monitors present data and how to interpret the information. It indicates the danger of placing undue reliance on this data and the importance of verification by blood gas analysis. There is a good description of the effect on the capnogram of faulty valves in the anaesthesia breathing circuit. The effect of increased alveolar dead space is presented, but is a little harder for a newcomer to follow, than some other aspects of the text.

The clinical indications for the use of capnography are presented in a short final chapter to this section. Most of the indications can be found in the text, but might be more usefully presented under discreet headings (e.g., disconnections as a sub-heading to SAFETY) in a concise manner.

The second section "Physiologic Perspectives on Carbon Dioxide" allows the reader to delve beyond the mechanics of the equipment and the data it presents, into an understanding of the physiological processes, which culminate in the appearance of carbon dioxide at the mouth.

A very good third section "Technologic Perspectives on Capnography" presents the physical principles involved in the different forms of capnometry. It describes the technical problems of providing accurate data (e.g., effects of perfusion of carbon dioxide through some plastics; the effect of water traps in the machine). The desirable features of a modern capnometer for routine use can be deduced from the text, but the average clinician would find a list of these features useful. (There is a reference to this information but the text is not one which would be readily available.)

The first introduction of many individuals to this form of monitoring may well be the sudden appearance of a

capnometer on the anaesthesia machine and thus there is likely to be undue reliance on the data or it may even be misinterpreted. This book should enable these individuals to update themselves. It should also enable newcomers to the field to understand this form of monitoring that is now becoming routine.

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Cardiopulmonary Cerebral Resuscitation Basic and Advanced Cardiac and Trauma Life Support: An Introduction to Resuscitation Medicine. 3rd Edition.

Safar P, Bircher NG. W.B. Saunders Company Ltd., Toronto, 1988. pp 464. ISBN 0-7216-2156-2. \$43.50

The scope of the material presented in the third edition of this text is broad. While the book includes the latest (1985) American Heart Association Guidelines and Standards on basic and advanced life support, it goes well beyond them. The section on basic life support is excellent. It covers not only basic airway management and closed chest CPR but also intubation, cricothyroidotomy, jet and standard mechanical ventilation, closed chest CPR and basic trauma life support. There are also sections on defibrillation, line placement, fluid resuscitation, advanced trauma life support, invasive haemodynamic monitoring and ECG interpretation. Variations and alternative methods of CPR such as open heart massage and emergency cardiopulmonary bypass are discussed. The pathophysiology of the post-resuscitation syndrome is reviewed and guidelines for post-resuscitation care are presented. There are chapters on organizing the delivery of resuscitation care from teaching skills to the management of mass disasters. A pot pourri of conditions requiring resuscitation is discussed in a chapter entitled special considerations. The text finishes with philosophical—ethical considerations and reinforces earlier discussion of withdrawal of support.

The book is easy to read with highlighted summaries of key points and is well illustrated for a text this size. The flexible, open minded approach to resuscitation and its emphasis on pragmatism is refreshing. The breadth of the subject matter necessitates some of the subjects being dealt with in a superficial manner but these are well referenced.

Although some recommendations are questionable (e.g., steroid for septic shock, rapid digitalization with $40 \mu\text{g} \cdot \text{kg}^{-1}$ over 12 hours, broad spectrum antibiotics for asthma, the use of PEEP in pulmonary embolism), this is an excellent text and has something for the paramedic to the specialist physician. This book would be most useful for medical students as an initial text prior to CPR training, and for residents who are about to be thrust into situations where advanced resuscitation and prolonged life support will be required.

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Near Misses in Anesthesia – Lessons Learned

Lewis JM, Fortrier T. Butterworths, Stoneham, MA, 1988. ISBN 0-909-90111-3 \$16.95 us

"This is a simple book about misadventures in anesthesia." If one read only the title, the foreword (from which the above quotation is taken), the preface, and the afterword, then the reader could be forgiven for thinking this book useful. The concept is basically sound: a collection of incidents during the course of anaesthesia, followed by a discussion of the problems and a few pertinent references.

Unfortunately, this book does not deliver what it could. The table of contents lists 45 misadventures, each with a title in the traditional style of pulp detective novels: "The case of the tilted timebomb," "The case of the cooperative coed." And that's what this book is – paperback anaesthetic fiction, the sort of book one reads to pass the time, waiting for an aeroplane or a surgeon.

Each incident is described on less than a page, with the "Resolution," "Discussion," and "References" on the following page. (Just like the detective story – don't read the ending until you've read the beginning.) But where the book truly fails is in the content, because the incidents are not like the case reports found in anaesthetic journals. The purpose of case reports is to provide the reader with a detailed description of a particular patient problem (so as to allow readers to make their own judgements), and then to describe, again in detail, what happened (or did not). These incidents have been so severely edited as to deprive the reader of important details. For example, Incident #11 describes a "desperately ill neonate ... not a day old yet but (who) has already gotten into trouble with congestive heart failure." The anaesthetic consists of "relaxant and a touch of potent agent." Although 45 incidents are described, these represent only some 21

topics, with repetition of the problems (e.g., two cases of invalid pressure readings from arterial lines; two cases of pneumothorax; two cases of succinylcholine given before the induction agent). The style of the text also mimics the table of contents: "but good golly, her blood pressure sure is low"; "you're rounding in the recovery room."

The "Resolution" continues in the same theme, breathlessly exhorting the reader as to what to do. "Insert a large gauge IV catheter into the right chest ... experience enormous relief at the impressive hiss of escaping gas."

More information is available in the "Discussions" and "References." Some of the former provide concise and excellent descriptions of the pathophysiology of the incidents, e.g., distortion of the larynx by haematoma in a neck incision, hypotension from rapid intravenous infusion of vancomycin. The references are also a mixed lot, with a few representing case reports about similar incidents. About one-third the references date from the 1970's, and several from the 1960's, although a few recent publications from 1988 also appear. In summary, this book is of "anecdotal" interest only, but might be useful for generating ideas for teaching.

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Anesthesiology: Problem-Oriented Patient Management. 2nd. Edition.

Yao F-SF, Artusio JF, Jr. (Eds). J.B. Lippincott Company, Philadelphia, PA. 1988. pp 704. ISBN 0-397-50800-X. \$45.00 us

The 702 pages of this book comprise the second edition, the first having been published in 1983. The general format consists of the introduction of each topic by a short scenario, followed by discussion of pre-, intra- and postoperative problems by means of questions and answers. References follow each question and answer.

The book attempts to cover the surgical and physiological disease spectrum in discussing a series of topics related to respiratory, cardiovascular, gastrointestinal, endocrine and genito-urinary systems, among others. Anaesthetic problems are addressed from both the paediatric and adult perspectives. Several new topics were added to this edition, including facial deformity, brachial plexus block, hepatic lobectomy, necrotizing enterocolitis, in addition to eight others. References to sections abstracted from the first edition were sometimes dated (e.g., 1973) while those references to the newer topics were more current (1983–86).

The book is dedicated to residents, past, present and

future, and it is at this level that its material is aimed. It presents facts: physiological, pharmacological and surgical facts, and thus provides an excellent review for written exams.

In attempting to address many topics, important clinical aspects of anaesthesia have necessarily suffered. The breakdown of sodium nitroprusside was discussed in detail but clinical aspects such as problem oriented anaesthetic induction techniques were treated unidimensionally. However, to its credit, it does present a technique and fulfils its obligation in discussing it.

Overall, the fact-finding mission on which this book embarks is enjoyable although it may be considered clinically weak.

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Anesthesiology Report, Vol. 1, No. 1, 1988

C.V. Mosby Company, St. Louis, MO. One Year Subscription \$49.50 US and \$50.50 Canadian & Intl.

This is the first of a new serial publication which has been presented in an attractive contemporary style. The layout is crisp and clearly printed with colourful graphical illustrations which appeal to the eye. Its main purpose is to provide authoritative opinions on current anaesthetic problems by experienced consultants. Regular additional features include a selected literature review and a consultation section to debate clinical problems.

Paediatric anaesthesia is comprehensively and critically discussed in this introductory issue, with contributors largely from John Hopkins Faculty of Anesthesiology and Critical Care Medicine. Outstanding commentaries are provided on recent advances in CPR, the rapidly expanding field of day care surgery, controversies in the management of anaesthesia for tonsillectomy, postoperative apnoea in infants and the place of regional anaesthesia techniques in paediatric care. The Consultant's Corner is ably filled by Dr. D. Ryan Cook's persuasive arguments in favour of abandoning the use of succinylcholine.

Undoubtedly, this sort of publication is becoming increasingly popular. Concise and reliable summaries fulfil a need for busy clinicians and those preparing for examinations. It would be a bonus if this journal also served as a stimulus to the reader to research the original articles.

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Guide to Immediate Anaesthetic Reactions

Watkins J, Levy CJ (Eds.). Butterworths, Stoneham, MA, 1988. ISBN 0-407-00936. \$21.95 US

This multi-author book, with well-established and reputable contributors from Australia, Finland and the U.K., gives the reader an international perspective of the incidence and the management of anaesthesia-induced allergic drug reactions. It is concise, well-written, and provides the reader with relevant and up-to-date information in the field of allergic drug reactions and clinical anaesthesia. The book opens with a chapter on the immunological basis of anaphylactic and anaphylactoid reactions, and discusses the pathogenesis of various types of drug reactions with pictorial and graphical aids. This introductory chapter describes the complexities of immunopathology in terms that can be easily understood by the specialist and the novice alike. This is followed by a chapter devoted entirely to the anaesthetic drug reactions. It deals with both the drugs used in general and local anaesthesia, and explores the basis of the changing trends in the incidence of allergic reactions with different subclasses of drugs. It provides the reader with definitive epidemiological data on the incidence of morbidity and mortality pertaining to anaesthesia induced reactions.

The following two chapters explore the pathological basis of the clinical manifestations of a drug reaction and discuss theoretical and practical aspects of the management of allergic drug reactions. The appropriate investigations and their significance are discussed in another chapter. The final chapter is devoted to adverse reactions resulting from defects of enzyme function rather than immune system mediated reactions and provides useful insight into subjects such as malignant hyperthermia and other rare problems related to inborn errors of metabolism. The manuscript also includes valuable appendices on typical case reports, comprehensive treatment protocols for immediate practical use, detailed descriptions of *in vivo* and *in vitro* tests of hypersensitivity reactions, along with recommendations for prophylactic regimes. The book has succeeded admirably in providing the reader with pathogenesis, clinical manifestations, diagnosis and treatment of anaesthesia-induced drug reactions. Because of its practical approach and its design to fit the pocket, it is a valuable addition for all practising anaesthetists and departments.

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Pocket Manual of Anesthesia

Lenz G, Kotler B, Schorer R, Spoerel W. B.C. Decker Inc., Boston, 1988. \$18.50 US

"Pocket Manual of Anesthesia" is the English translation of the German "MEMO Anästhesie" published in 1985. The book presents a collection of anaesthetic facts and data in a concise format, intended as a practical and portable reference for daily operating room practice. The manual is written entirely in point form with a generous supply of tables, figures and graphs. Although the text has been "adapted" to North American practice, there remain nuances which undoubtedly reflect its European origins.

Approximately one-third of the manual is devoted to the pharmacology of anaesthetic and adjuvant drugs. Curiously absent from mention are curare, morphine, edrophonium, nifedipine and labetalol. More curious still is the omission of malignant hyperthermia susceptibility from the list of contra-indications to succinylcholine! A substantial section covers the practical aspects of regional anaesthesia, central venous and arterial cannulation: indications, contra-indications and technical "how-to" guidelines.

Sections entitled "Special Situations" and "Anesthesia-related problems" describe the anaesthetic considerations and management principles for a wide variety of medical conditions (e.g., asthma, diabetes mellitus) and surgical situations (e.g., bronchoscopy, TURP). It is unclear what distinguishes a "Special Situation" from a "Problem" and it is consequently often difficult to locate a particular subject without frequently referring to the index.

Overall, the manual does provide a collection of useful information in a compact, portable format. As the authors correctly point out, "its proper use requires a well-founded basic knowledge and practical experience," in a sense, the knowledge and experience to read between the lines.

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