Book Reviews

Capnography: Clinical Aspects

J. S. Gravenstein, M. B. Jaffe, D. A. Paulus (eds)
Cambridge University Press: Cambridge, UK, 441 pp; indexed, illustrated
ISBN 0-521-54034-8; Price £65.00

This new book attempts to redress the dearth of concise and accessible information on this previously rather neglected subject. The editors have responded to a growing recognition of the value of capnography and have collated the opinions of recognized experts in the field. With almost 60 contributors, the vast majority of authoritative names, predominantly from the US and Europe, are represented.

The clinical value of capnography, as an early warning device, in detecting potentially life-threatening events in advance of other clinical parameters is highlighted. It is repeatedly emphasized that capnography is not only an indicator of ventilation, but also of circulation and metabolism. There is a definite shift of focus from the traditional time-based to volumetric capnography. The majority of the book correctly focuses on the clinical aspects and uses of capnography. The remainder deals with physiological, historical and technical aspects. The editors are to be commended for the inclusion of sections on the rarely explored topics of capnography during sedation, sleep and the therapeutic use of ambulatory capnography for panic disorders and asthma.

The editors stress that the book should be regarded more as a symposium rather than as a textbook given the number of contributors and the levels of personal opinion within each chapter. Although the wealth of contributors has led to some unavoidable repetition, the text, on the whole, is well-written and remains fresh and enthusiastic throughout. The layout is consistent and the chapters have been divided into distinct subheadings to further improve accessibility. Of particular note is an appendix including patterns of time-based capnograms, which will be of practical value to readers. The text is complemented by liberal use of high-quality line diagrams, graphs and photographs. However use of colour would have added to the overall appeal and clarity of the book. Also, incidentally, the chapter on capnography in the intensive care unit suggests an intubating dose of succinylcholine of 10 mg! For completeness, some discussions about capnography and semi-open anaesthetic breathing systems with definitions of rebreathing would have been welcomed. Perhaps these will appear in the historical section of future editions!

The level of expertise and exquisite detail suggest that it will be of value primarily as a specialist reference text. The broad range of topics will be of interest to all those involved in anaesthesia, critical care, neonatology and respiratory medicine. This book is a commendable attempt to cover an otherwise difficult subject in a readable yet systematic format. As such it should find a place in most university or teaching departments.

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Anaesthetic Aide Memoire

ISBN: 1-841101-92-3; Price £17.50

This small book of 180 pages is divided into eight sections and starts with the wise and entertaining 'Thinking and teaching' section. Good fun.

The next two sections are 'Preoperative management' and the 'Conduct of anaesthesia'. Some of the information presented here is too sparse to be of any...
real value and seems to be included for completeness of the topic for example four lines on ‘Safe anaesthetic in liver disease’. Other parts are much too basic to fulfil the author’s objectives of being a useful reference for senior trainees and consultants but would be relevant for new trainees. Just when you might get frustrated you come across one of the many helpful algorithms such as the ‘Management of paediatric murmurs’ algorithm or the practical and comprehensive antithrombotic prophylaxis and postoperative pain management guidelines.

It is imperative in a small didactic book like this that the advice is practical, up-to-date and accurate. The information regarding hypertension, the management of diabetes mellitus and steroid replacement therapy does not meet such a high standard.

The sections covering Physiology, Pharmacology/statistics and Audit lend themselves much better to the authors approach. There are numerous aspects of the basic sciences that I cannot precisely bring to mind for teaching trainees and this small book would be helpful in that regard. Like wise, it may provide a useful adjunct to revision for both parts of the FRCA.

The emergency section is comprehensive, includes all the advance life support algorithms and is well laid out with a largely consistent recognition and management approach.

The authors describe this book as a ‘compilation of lists and diagrams … for reference when a fact, statistic or formula eludes the memory’ and not a ‘definitive pocket textbook of anaesthesia’. With so many reproduced good algorithms and useful nuggets of information the book is at its best when it sticks to this objective. It is difficult to see who will buy this book though as the practical areas are too basic for the target readership whilst complex topics are too sparsely covered for the novice. It may be useful for the departmental library but I won’t be recommending it to the trainees.

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Clinical Transesophageal Echocardiography: A Problem-Oriented Approach, 2nd edition

S. Konstadt, S. Sherman, Y. Oka (eds)

This comprehensive textbook reviews the practise of transoesophageal echocardiography (TEE) from a problem-oriented approach with extensive use of clinical scenarios and over 700 TEE photos and 300 colour images. The key bullet points are an excellent feature at the end of most chapters.

The book is divided into three sections, Basic Principles, Clinical Applications, Fundamental Concepts and Problem-Oriented Case Discussions.

The first section, Basic Principles, is divided into six chapters in clear, usable language, explaining the physics of ultrasound in a reasonable amount of depth, though if sitting the NEB or the BSE/ACTA perioperative examination further depth of knowledge of physics would be required.

There are new chapters on training and safety issues. This is increasingly important in the present climate of Clinical Governance and outlines the risk factors and classification well. The last chapter on artefacts has good pictures and sequentially goes through common and uncommon structures as well as variants of normal that can often be easily mistaken.

The second section has nine chapters and explains normal function, evaluation and echocardiographic assessment, outcome and summary, with key points. Although the first chapter in this section does not have key points at the end, it describes a variety of methods, new and old, to assess regional wall motion abnormalities and global function with good illustrations, for example, colour kinesis and colour M-mode tissue doppler. Assessment of diastolic function is good though the mitral inflow doppler velocity and doppler tissue imaging diagrams are transthoracic.

Echocardiographic evaluation of the Mitral valve is well covered both in assessment of regurgitation and stenosis with PISA explained succinctly. The 3D diagrams relating the mitral valve to the probe position are excellent. SAM risk factors and explanation is good and well illustrated.

The chapter on normal and abnormal characteristics of Prosthetic valves is very good with case illustrations of each type of valve. The pictures showing light shining through the valves where the washing jets would be is novel. There are valuable points on the use of the
The chapters on aortic, tricuspid, pulmonary valves, pericardial disease and major arteries are very good with descriptions of the assessment and pathology, excellent pictures and diagrams. The paragraphs on Measurement Areas when Using the Continuity Equation for Aortic Stenosis make a very important point. The clinical case scenarios illustrating the use of TEE and clinical decisions based on the findings are excellent.

The third section extends the use of case scenarios to illustrate the diagnosis and treatment strategies using TEE. The chapter on assessment of the correct placement of surgical devices is a topic not usually covered in other texts, but the use of (VADs) is becoming more commonplace and so is very informative. There is a good schematic representation of the causes of congestive heart failure and the summary stating that ‘The quality and quantity of information depends on how one considers the patient’s condition and how effectively TEE is used. There is definitely a learning curve’ is very appropriate and applicable.

Studies are showing the increasing importance of evaluation of the mitral valve in ischaemic heart disease. There is some repetition of anatomy, which doesn’t hurt. This is an extremely useful chapter as the patient population age and co-morbidities rise.

The chapter on hypertrophic obstructive cardiomyopathy is also very valuable for these reasons. The incidence of subvalvular obstruction following aortic valve surgery, and revascularising hypertensive patients appears to be an increasing problem and would not be recognised without the use of TEE.

The other chapters: Native Aortic Valve Endocarditis, Aortic Dissection, Aortic Atherosclerosis and The Use of TEE During Endovascular Stenting in Thoracic Aneurysms, Diagnosis of Myocardial Ischaemia and Critical Care and Trauma as well as Lung Transplantation are clinically important. Some of these topics are not usually covered. The chapters provide practical ways of diagnosing and solving problems.

As the role of anaesthetists evolves in perioperative echocardiography, this book provides a unique way of assessing patients and their problems providing information for both the novice and the experienced echocardiographer. It is easy to read with its clinical approach, key bullet points and is well referenced.

I recommend this book to all practising perioperative echocardiographers and to those preparing for examinations in this topic.

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Core Topics in Cardiac Anaesthesia

J. M. Mackay, J. E. Arrowsmith (eds)
ISBN 1-84110-133-8; Price £35.00

This 367-page book consists of 66, 3–6 pages, topics grouped into 11 sections. The sections are anatomy and physiology, cardiac pharmacology, diagnosis of cardiac disease, cardiac surgery for anaesthetists, monitoring, routine coronary heart surgery, anaesthetic management of specific disorders, paediatric cardiac anaesthesia, cardiopulmonary bypass, cardiac intensive care and miscellaneous topics. These have been chosen on the basis of guidelines from the Royal College of Anaesthetists, the Society of Cardiovascular Anesthesiologists and past examination papers. The editors have managed to maintain a consistent style throughout the book, despite the use of 62 contributors.

The topics range from the quite simple and basic, such as opioids, to the potentially daunting, such as cardiac embryology. This variation is quite appropriate. The authors have aimed at avoiding the writing of a comprehensive textbook. However, although the topics do not contain the depth of discussion that one might expect from a comprehensive textbook, all the important information is concisely conveyed to the reader. The topics are generally easy to read (5–10 min), informative and can be used as a quick refresher. Each topic has clearly presented illustrations and most topics have tables summarising key points. In addition, all the topics have an ultimate key-points section including references for further reading.

The editors have aimed this book at anaesthetic trainees in their first 3–6 months of training in cardiac anaesthesia and intensive care. I would recommend...
this book to all trainees wishing to get an overview about cardiac anaesthesia and intensive care. It may be useful to those working towards their examinations. In addition, there are a number of topics such as: symptoms and signs of cardiac disease; invasive and non-invasive diagnostic techniques; congenital heart disease; and pregnancy, to name a few, that would be of interest to the non-cardiac anaesthetist (trainee or consultant). This book can be a useful quick reference for the trained cardiac anaesthetist.

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