
T. N. Calvey and N. E. Williams
ISBN: 0-632-05605-3; Price £79.50

This is the fourth edition of a deservedly highly successful textbook of pharmacology for anaesthetists. I well remember the first edition in 1982. In my opinion, the strength of the book has always been its ability to put across clearly and unambiguously the principles of pharmacology, especially pharmacokinetics. This knowledge is needed to use drugs effectively, especially when we are confronted with new techniques of delivery, such as target-controlled infusion with propofol and new drugs, such as remifentanil.

How does the new edition compare with its predecessors? First of all, it is larger and the text layout remains rather formal and old fashioned. There are few illustrations and these are mainly confined to line drawings relating to drug and receptor action. This means that there may be in places up to 13 pages of uninterrupted text. This, together with its length, may well put off the intended readership, e.g. those studying for primary examination of the Fellowship of the Royal College of Anaesthetists. This would be a pity as the information contained is generally excellent. It is also pertinent to consider whether the transition from a small textbook to a book of this size should not have demanded the inclusion of references in the text, as is generally the case in Kaufman and Taberner’s larger, but similarly priced Pharmacology in the Practise of Anaesthesia (1996). Calvey and Williams prefer a further reading list at the end of each chapter. The danger of the latter approach is to engender a tendency to didacticism and also to be out of date. For example, the chapter on anticoagulants has a further reading list with a mean reference date of 1991. In the chapter on diabetes management during surgery, the now mainly discarded Alberti regime is given prominence over the more commonly used insulin syringe pump.

There are several omissions in the coverage of both subjects and drugs. For example, there is no discussion on heart failure and bronchial asthma and use of drugs and implications for anaesthesia. However, the management of angina and hypertension is given due prominence. There is also no mention of antibiotics or drug treatment of endocrine disease, both common questions for examination candidates. I think these should have been included in a book of this size.

What of the competition? Peck and Williams’ Pharmacology for Anaesthesia and Intensive Care (2000) covers most of the same ground and is a similar size to the first edition of Calvey and Williams. It is clearly and concisely written, well presented and up to date. It is also considerably cheaper at £27.50. On the other end of the scale is the aforementioned Kaufman and Taberner, which is similarly priced (£79.00), comprehensive and well referenced, but nearly double the size of Calvey and Williams. Other possibilities include the combined Pharmacology and Physiology approach of Stoelting or McCaughey and colleagues.

Who should buy this book? It is still an excellent and outstanding treatise on Pharmacology and I read it from cover to cover with increasing admiration and interest. It certainly taught me a thing or two. However, for examination candidates it may now seem too daunting, so I feel that Peck and Williams would now be a better bet as it also includes a copy of QBase Anaesthesia on CD-ROM containing multiple choice questions. However, from the departmental purchase point of view, Calvey and Williams is a must and will keep its place as one of the pre-eminent texts on pharmacology for anaesthetists.

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The Pharmacology of Inhaled Anesthetics

E. I. Eger, J. B. Eisenkraft, R. B. Weiskopf (eds)
Sponsored by the Dannemiller Memorial Educational Foundation and privately published under an educational grant from Baxter Healthcare, 2002, 327 pp; indexed, illustrated
Availability: By Internet: www.europe_acc_education@baxter.com
By post: Messrs Baxter Healthcare (local regional office)

The package includes two digital versatile disks (DVDs), which cover the material in the book in the form of a 10 h seminar conducted by Professor Eger together with Post Test Questions. There is also a ‘Clinical Express Lane’, which allows rapid access to some of the material. Limited quantities of the book and DVDs will be available exclusively through Baxter Healthcare in Europe with preference given to teaching institutions that plan to use them as part of their formal educational programme.

At the outset, it should be noted that Baxter Healthcare are the manufacturers of desflurane, Suprane®. Professor Eger states in the faculty disclosure in the foreword that he has worked in a variety of capacities for the company. This is no way detracts from the relevance of the material presented and the prominence given to the various anaesthetics mentioned in the text.

Of considerable relevance and interest to UK anaesthetists (and I suspect anaesthesiologists in the USA as well) is the intended audience as stated in the foreword: ‘This material is intended for anaesthesiologists and certified registered nurse anaesthetists (CRNAs)’. Indeed, the seminar is presented to a group of both residents and student RNAs (SRNAs) at Wake Forest University Baptist Medical Center, Winston-Salem, North Carolina, USA. The first DVD is introduced by the respective heads of both the resident and CRNA programmes. The American Association of Nurse Anesthetists also approves the teaching material for continuing education.

The book is beautifully produced. The authors state in the preface that ‘individual texts have described the pharmacology and clinical application of individual inhaled anaesthetics … the present text enlarges that view (and) provides a broader inclusive focus’. Each chapter includes learning objectives and an abstract as well as a comprehensive and generally up-to-date reference section. The chapters cover all the necessary material including History, Physical Properties, MAC (minimum alveolar concentration), Mechanisms, Pharmacokinetics, Effects on Major Systems, Vaporization and Delivery, Clinical Applications and a Recipe for delivery of the (nearly) ideal anaesthetic. It concludes with a comprehensive question section on each chapter. Adequate emphasis is given also to the use of reduced gas flows, economy of agents and drug acquisition costs and the effect of anaesthetic department budgets with use of the different agents. The DVDs cover in seminar form much of the material in the book.

The book is clearly presented and pretty comprehensive. Not surprisingly the chapter on MAC is masterly and beyond reproach. However, I would have liked to see more on the relationship of infusions of remifentanil and reduction in MAC of the modern inhalation agents. I also felt that there was too much emphasis placed on nitrous oxide as a supplement, a role that can now be taken by remifentanil, thus removing any possibility of hypoxic mixtures and facilitating the use of closed circuit anaesthesia. The chapter on mechanisms was rather sketchy but covered most of the ground. Another omission was the use of awareness monitoring during inhalation (vs. i.v. anaesthesia). Bispectral analysis gets a couple of sentences and the authors dismissed the use of auditory evoked potentials in one sentence as ‘demanding appreciable preparation and is not widely used’. The latest reference is 1997 and none of the more recent work using the Alaris auditory evoked potential monitor is mentioned.

However, it is the inclusion of the seminars on DVDs, all conducted by Professor Eger to an audience of about 25 residents and SRNAs, that makes this publication a real winner. The seminars last altogether about 10 h and are presented in the same order as in the book, although not quite as comprehensively. They are masterly and are a lesson to all of us who teach medical students or residents. The seminars were held over a period of 2 days and the filming captures beautifully the atmosphere of the sessions. I was as impressed by the attentiveness, knowledge and participation of the audience as I was by the enthusiasm and expertise of the presenter. In fact, it was not long before I became part of that audience, interjecting and answering questions alongside the participants. Incidentally, the knowledge of the residents and SRNAs seemed equal. In fact, apart from those who participated in the operating session or in whom the identity badge was visible, it was impossible to tell...
between the two groups. However, I understand that joint sessions are unusual and are by no means the norm. Why not, one wonders? The fact that I sat through the whole 10 h programme in about three sessions underlines the excellence of the material. Where appropriate, we were able to witness actual patients being anaesthetized in the operating rooms at the medical centre. It was particularly interesting to see the effects of a rapid increase in desflurane concentration on heart rate and blood pressure both before and after fentanyl. We also witnessed smooth induction with desflurane in front of a doubting audience. Given the rivalry between desflurane and sevoflurane and the respective Baxter and Abbott protagonists and antagonists, the presentation of good and bad points of both anaesthetics were very well balanced considering the grant had been obtained from Baxter. However, European audiences may be unaware that the packaging of sevoflurane in the USA includes the following statement 'To minimize exposure to Compound A, sevoflurane exposure should not exceed 2 MAC hours at flow rates of \(1 \leq \text{flow rate} \leq 2 \text{ L min}^{-1}\). Fresh gas flows of the \(<1 \text{ L min}^{-1}\) are not recommended'. No such statement is included in the European packaging. The role and potential toxicity of Compound A is thus given quite a degree of prominence in both text and the seminars. 

In conclusion, this is quite frankly one of the most important teaching resources to become available to anaesthetists in recent years. The fact that it is obtainable free of charge is all the more remarkable. There is absolutely no doubt that this material should form the core knowledge of anaesthetic practice with inhalation agents and ideally should be seen and digested by all anaesthesia practitioners prior to giving their first solo inhalation anaesthetic.

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Anesthesia for the Cardiac Patient

Christopher A. Troianos
Mosby: St Louis, USA, 2002, 512 pp; 308 illus.; indexed
ISBN: 0-3230-0874-7; Price £75.00

Christopher Troianos, who is at the Mercy Hospital, Pittsburgh, PA, USA, has recruited 31 authors from 14 leading institutions across the USA collectively to produce a comprehensive book aimed at advancing the anaesthetic care of patients with cardiac disease requiring cardiac or non-cardiac surgery. Given that cardiac-related events are the most common cause of significant morbidity and mortality in patients undergoing elective surgery, the niche for such a book is self-evident.

The text is divided into four main sections, the first, entitled ‘Peri-operative Care of the Cardiac Patient’, contains chapters on preoperative evaluation, cardiovascular medications, intraoperative monitoring, perioperative transoesophageal monitoring, and postoperative care and pain management. Regional wall motion abnormalities detected by transoesophageal echocardiography are one of the earliest signs of myocardial ischaemia and Troianos has written an excellent chapter about the development and advances in its use, much of it based on his own extensive expertise in this area.

The second section reviews the anaesthetic management of specific cardiac disease processes and deals with each pathology in turn, suggesting haemodynamic goals for anaesthesia in cardiac and non-cardiac settings. The pathophysiology of myocardial ischaemia is carefully reviewed and the reasons for the lack of correlation among the various methods for detecting myocardial ischaemia are explained, along with newer concepts such as myocardial perfusion/contraction coupling.

The third section is dedicated to a discussion of topics specifically related to cardiothoracic surgical procedures such as cardiopulmonary bypass, minimally invasive cardiac surgery and cardiac transplantation. The final section is devoted to non-cardiac surgical settings and contains useful chapters on vascular surgery, trauma, neurosurgery, obstetrics, day care and thoracic surgery.

With the exception of perioperative \(\beta\)-adrenoceptor blockade, there is little evidence to suggest that specific anaesthetic agents or techniques significantly alter cardiac morbidity/mortality. Therefore, the ultimate aim of reducing myocardial ischaemia must be achieved by maintaining stable intraoperative haemodynamics with the avoidance of hypertension and tachycardia postoperatively. To this end, the book
achieves its aims well, offering a wealth of knowledge that will enable the reader to select appropriate strategies to achieve these goals for a wide variety of operating conditions. A minor criticism of the text is that the format can appear dull in places, with many tables. However, against this, each chapter concludes with a useful summary of key points and is well referenced.

At over 500 pages *Anesthesia for the Cardiac Patient* is an authoritative text, but its cost would probably not have a wide appeal to trainees within Europe. It is also clearly aimed at the North American market with a different emphasis in certain areas, for example the inclusion of billing procedures for transesophageal echocardiography and the evidently more widespread use of pulmonary artery catheters in cardiac surgery in the USA. I would therefore recommend the book as a useful and worthwhile reference book for the departmental library and for the anaesthetist with a special interest in cardiothoracic anaesthesia.

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The Anaesthesia Viva 1. Physiology and Pharmacology, 2nd edition

J. Urquhart, M. Blunt and C. Pinnock
*Greenwich Medical Media Limited: London, UK, 2003, 200 pp; indexed, illustrated*  

Book reviewing can be a somewhat formulaic process: receive book, read book, write a rigidly objective analysis, finish with a one-line conclusion. Readers, I must confess that I cannot remain objective in reviewing this book. The most important advice ever given to me on how to pass medical examinations was, 'Use small books'. To this end, when the first edition of *The Anaesthesia Viva 1. Physiology and Pharmacology* was published in 1996, I bought one immediately, along with its sister publication *The Anaesthesia Viva 2. Physics, Measurement, Safety, Clinical Anaesthesia*. I am sure that reading both slim volumes before examination vivas all but guaranteed my success.

*The Anaesthesia Viva 1* is essential reading for all junior anaesthetists facing clinical examinations and all senior anaesthetists charged with the task of administering practice vivas. The book fulfils two crucial functions. Primarily, it distils the syllabus of the Fellowship examination (FRCA) of the UK Royal College of Anaesthetists into a readable *aide memoire* for use shortly before a viva, reminding candidates of the important facts of a topic, at a time when the volume of information they have learnt threatens to be overwhelming. Secondly, this reviewer found that the book provided a useful skeleton of core knowledge on which secondary and tertiary facts could be hung, in order to build up a comprehensive body of revision.

The second edition contains updated material, and roughly 50 pages more information, all of which are relevant and straightforward in presentation. If I had one criticism, it would be that, for some unknown reason, the highly distinctive book cover has been changed, which cannot be the greatest marketing ploy ever.

And the one-line conclusion? Buy it!

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Core Cases in Critical Care

S. Ridley, G. Smith, A. Batchelor (eds)
*Greenwich Medical Media: London, UK, 2003, 250 pp; indexed, illustrated*  
ISBN: 1-84110-161-3; Price £29.50

There are now a significant number of books on the market that ‘aim to provide a springboard for members of the multidisciplinary critical care team to describe and discuss principles of integrative treatment’ through the use of case histories. When I was asked to review *Core Cases in Critical Care*, therefore,
I took the view that it was going to bring something pretty special to the party before I could recommend it. And it does. Between them the trio of editors have produced a sizeable body of good research, and are well respected as intensivists, so expectations were high even before opening the book.

The 20 case histories, written by a similarly distinguished panel of contributors, describe reasonably standard scenarios: e.g. oliguria after a hip replacement, a 19-yr-old with acute severe asthma. However, the format of the subsequent case discussion – analysis of the problem, pathophysiology, therapeutic goals, therapeutic options, outcomes, key points and further reading – is exceptionally clear and informative, without being overly prescriptive. Moreover, the amount of information provided is of a volume and complexity ideally suited to the book’s target audience: trainees in critical care medicine, nursing and allied health professions; the chapters on sepsis and multi-organ failure, management of metabolic coma, and transfer of critically ill patients are particularly admirable in this respect.

Core Cases in Critical Care is a welcome edition to the genre.

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Recent Advances in Anaesthesia and Intensive Care – 22

A. P. Adams, J. N. Cashman, R. M. Grounds (eds)
Greenwich Medical Media: London, UK, 2003, 308 pp; indexed, illustrated

Revalidation – a word that strikes irritation and apathy into the heart of many a doctor. Nevertheless, the concept of revalidation is one that is set to remain with us for the foreseeable future. A significant proportion of the process will involve doctors providing evidence that they undertake ‘continuous professional development’, in order to keep abreast of theoretical and technological progress in their medical specialty – and that is where the Recent Advances series come into their own.

I have always been a fan of these compilations. Sure, the pace of book publishing often lags behind that of medical advance, such that the information contained in these books are already dated. In addition, they are not the most comprehensive of reviews, but they do serve as interesting and well-informed updates on a range of ‘hot topics’. As such, they provide valuable information for consultant and junior anaesthetists.

It is interesting to see how different aspects of the practice of anaesthesia assume prominence over time. Recent Advances in Anaesthesia and Intensive Care – 22, for instance, includes greater emphases on acute and intensive anaesthetic management than previous editions (formerly entitled Recent Advances in Anaesthesia and Analgesia). In addition, three of the 12 chapters – which to this reviewer’s mind are the best chapters in the book – are concerned with clinical governance matters: Chapter 9 ‘Managing medical mishaps: learning lessons from industry’, Chapter 10 ‘Legal issues in anaesthesia and intensive care’ and Chapter 11 ‘Education and training in anaesthesia’. Although of less personal interest, Chapter 1, an excellent overview of the COX enzyme system, also particularly impressed me as a topic, which will be surely of importance to all anaesthetists, in terms of future options for postoperative pain relief.

In short, an admirable addition to a popular and highly regarded series.

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Busy intensivists can often find themselves in a mindset where it seems simply impossible to keep up to date with the latest information on their speciality. This is exacerbated by the fact that many of them have become wary of the latest ‘fads’ and so-called advances in management. Who has not had their hands burnt by miracle cures such as high-dose steroids or monoclonal antibodies? This healthy scepticism often imperceptibly spills over into cynicism and this can seriously undermine the introduction of newer techniques that actually do have patient benefit. BMA Books and Helen Galley are continuing to produce a magnificent series of monographs on those topics in the practice of intensive care that are constantly being updated and re-focused. In particular, they are presented in digestible chunks where the intensivist is able to keep up without too much effort. However, do they contain information that will seriously challenge present practice or do they just tantalize the intensivist that some wonderful development is just around the corner … yet never seeming to materialize?

Number 10 in the series considers Inflammation and Immunity and sets out to make the intensivist aware of the latest developments in this area. There are seven chapters including Immunoparalysis, Apoptosis, Virus interaction with host immunity, The role of the neutrophil, T cell immunity and sepsis, Metalloproteinases and inflammation and finally, Glucocorticoid therapy in sepsis.

I especially enjoyed the chapter on apoptosis, in particular making the point that it is pronounced apo- and -ptosis (as in the eye, with a silent ‘p’). The review of the neutrophil and its ability to both benefit the patient and contribute to reperfusion injury was masterly. However, perhaps the most thought-provoking chapter was the last one on Glucocorticoid Therapy in Septic Shock. It is now beginning to emerge that, whereas short high-dose glucocorticoid therapy is harmful, there is a subset of inotrope-dependent patients in whom a small dose of steroids for a longer period may restore vascular sensitivity and improve haemodynamics. It could be possible, therefore, to actually select patients in the intensive care unit who respond to low-dose steroid therapy, hopefully with an improvement in outcome.

Those of us who have started to collect this series will have no need to hesitate in making the next purchase. However, I would also implore that copies are kept in the intensive care unit, readily available on the shelf, for the inquisitive trainee intensivist who has a spare moment to keep up to date with the latest developments.

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