

Book Reviews

Gerry's Real World Guide to Pharmacokinetics and Other Things

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Troubador Publishing Ltd: Leicester, UK, 142 pp; indexed, illustrated

ISBN: 1-905237-16-2; Price£9.95

Pharmacokinetics is perhaps not the best loved topic in the anaesthetic curriculum. Multi-compartment models can seem a long way from clinical practice and those without a mathematical bent find the formulae and equations of pharmacokinetic modelling daunting. Most clinical anaesthetists do not think about time constants and volumes of distribution at all during the course of the average working day. Despite this, pharmacokinetics is important. If anaesthetists do not think explicitly about pharmacokinetic modelling it is because they have a good understanding of, and feeling for, the time course of action of the drugs that they use and how this may vary in different circumstances. This instinctive understanding does not exist in a vacuum. It rests upon a body of knowledge about pharmacokinetic properties of each drug. Unlike practitioners in many other specialties, anaesthetists work with many drugs that act in seconds or minutes rather than in days or weeks. To practice with insight the anaesthetist must have an understanding of pharmacokinetics and its application in the real world. This little monograph delivers the necessary understanding.

This is a little book. Excluding the preface, references and appendices there are only 126 pages of text. The book is designed to be read from cover to cover. It takes the form of a series of dialogues between Dr Gerry, an infinitely wise and well informed, if somewhat acerbic, Consultant Anaesthetist with a deep knowledge of pharmacokinetics and his young trainee Dr Bob. The British reader may think of Dr Bob as being an experienced senior health officer (SHO). He is able to give a safe anaesthetic and is keen to learn and develop. However, he is still building up both his knowledge base and clinical experience and is prey to many of the common pitfalls of the everyday practice of the clinical anaesthesia. The chapters describe short vignettes in which Dr Gerry and Dr Bob deal with a series of challenging clinical cases and often

challenging surgeons. In each chapter the pharmacokinetic problem to be addressed is presented in a clinical context. The topics covered include the pharmacokinetics of anaesthetic induction, multi-compartment models and drug redistribution, the impact of renal failure, haemorrhage and obesity on drug handling, drug elimination in breast milk and the pharmacokinetics of drug infusions. In each case the relevant pharmacokinetic models and equations are presented but Dr Bob and the reader are encouraged to do real calculations with real numbers using these equations and to work out what these models might represent in terms of real life processes. In one example this is as simple as working out how propofol is diluted as it is injected into an arm vein, passes through the venous circulation to the right heart, on through the pulmonary circulation, through the left heart and on to the brain and how this dilution is affected by two different rates of injection. It may fairly be argued that what the reader is asked to imagine is a considerable over simplification of a complex process. However, it is a useful mental working model and the lessons drawn about the impacts of different rates of injection on the concentration of drug arriving at the heart and the consequent myocardial depression are undoubtedly valuable.

The characters in situations in this book are drawn larger than life. Dr Gerry has a coffee addiction that could earn him an implantable defibrillator. The surgeons revel in names such as Mr Hawley Crippen and Dr Sam Pickwick, a rotund junk food eating obesity surgeon, and have personality traits to match. The interactions between Dr Gerry and his surgical colleagues would probably lead to them being suspended in a modern National Health Service (NHS) hospital and I would emphasise that this book is a tutor in pharmacokinetics not in anaesthesia and operating list management. It is nevertheless a very good read. The book does lack an index and I feel that this is a major

shortcoming. Nevertheless this is a delightful and well-written book which succeeds in its aim of teaching pharmacokinetics and will be a welcome relief to any trainee studying for professional examinations. It deserves a place in any trainees pre-examination reading list and should be saved up as a treat for the

dark days when exam preparation is becoming almost unbearably tedious but the exam is still some time away.

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Review of Essentials of Airway Management

S. Dolenska, P. Dalal, A. Taylor

Greenwich Medical Books: Greenwich, UK, 2006, 140 pp

ISBN: 1-841101-53-2; Price £17.50

To paraphrase a well-known television advertisement, 'this book does what it says on the cover'. In the preface, the author describes the book as a concise and basic text for senior health officers (SHOs) in anaesthesia and operating department assistants, but it has much more to offer than that. Drawing together aspects of airway management into a single text should appeal to a wide range of anaesthetists, including those responsible for teaching airway skills. In what is becoming an increasingly crowded training agenda in anaesthesia, perhaps we should focus more explicitly on a subject which remains at the heart of maintaining the safety of our patients.

The 140 pages are divided between 12 chapters. The book begins with Airway Assessment, followed by Anatomy and Routine Intubation. Six out of the following seven chapters discuss airway management in the context of the common clinical scenarios a trainee would be expected to encounter. These include Abdominal Surgery, Obstetrics, and Head and Neck Surgery. Somewhat puzzlingly, a chapter on Airway Management Without Intubation appears in the middle of this section. It doesn't seem logical to leave the discussion of basic airway management (such as maintaining an airway using a face mask with or without adjuncts) until Chapter 7. We would have preferred a chapter on the general aspects of airway management including intubation to have followed Anatomy and then Airway Assessment.

Perhaps the order in which the chapters have been arranged reflects the challenge in developing and teaching a strategic model for managing the airway as well as coaching the generic concepts and skills. Intubation dominates most trainees approach to assessing and managing the airway and, to a degree, the book mirrors this. It is quite a challenge to teach individuals to consider the wider aspects of airway management in individual patients and avoid becoming preoccupied with intubation.

The penultimate chapter entitled The Difficult Airway offers an effective overview of the subject. Since it deals with some of the more basic airway problems that beginners are bound to encounter through lack of experience, this chapter should have appeared much earlier.

Setting aside the order, each chapter is concise, methodical, and readable. The text consists of an effective blend of short paragraphs and either numbered or bulleted points. The layout is enhanced by a plentiful selection of diagrams, pictures, and tables. Each chapter is concluded with a short summary of key points and a limited bibliography.

The authors guide the reader through each subject step by step. Their descriptions paint a clear picture of the clinical processes that are taking place and this is typified by the chapter on Surgery in the Prone Position.

Apart from one or two minor niggles, the content of the chapters is comprehensive, clinically sound, in line with common practice, and would be difficult to improve upon.

One area that appears to have been overlooked is the effect of different types of anaesthesia on the airway and ventilation and how this necessarily influences the approach to airway management (e.g. inhalational induction). Though there is a section on complications in recovery, the authors don't mention how and why emergence may be accompanied by airway problems and how to minimize the frequency of them. Perhaps it would be helpful to guide the trainee through the phases of losing and regaining consciousness and the resulting changes that take place in the airway and with ventilation.

The other issue relates to 'test inflations before giving the paralysing agent' described in the chapter Routine Intubation. If this proves difficult (which is not uncommon for inexperienced trainees) the reader is referred to the chapter on the Difficult Airway.