

*Applied Pharmacology in Anaesthesia and Critical Care*, 1st Edn, 2012. A. Milner and E. Welch (editors). Published by Medpharm Publications. ISBN 9780620537261.

Written and edited by practising clinicians, this detailed multi-author South African text aims to provide an up-to-date summary of all aspects of pharmacology for those preparing for the South African examinations in anaesthesia (equivalent to the primary and final FRCA examinations). Pharmacology texts have traditionally offered large sections of dry prose, interspersed with poorly explained graphs and equations all with seemingly little clinical relevance. However, Milner and Welch's book is a pleasant surprise. Although a weighty paperback at over 700 pages, we found it to be thoroughly readable and aimed squarely at trainees and the 'Clapham omnibus' anaesthetist and intensivist.

A sound understanding of clinical pharmacology requires a thorough grounding in pharmacokinetics and pharmacodynamics and these are covered first. At times, these topics can seem difficult and inaccessible but with this text, it is refreshing to see such an effort to make these subjects more comprehensible. In repeatedly tying theory to clinical practice, these areas become readable and memorable. Clearance is particularly well covered with all relevant detail of hepatic and renal systems but also other important routes such as the lungs and plasma. This section is concluded with a succinct set of summary points which categorizes drugs according to duration of action: those lasting for a few minutes cleared by plasma enzymes, those lasting a moderate length of time cleared via the liver, and those lasting a long period dealt with by the kidney. The classic graphs and equations are presented in a simple and clear manner and would be ideal for reproduction in a viva or teaching situation.

All categories of drug with relevance to everyday clinical practice and examination preparation are discussed. Subject matter is clearly presented with chapters presenting an introductory overview followed by a list of key concepts. Drugs are discussed both individually and in direct comparison with others. Summary tables throughout the text allow easy reference. While retaining great detail, the clarity of presentation prevents this from becoming overwhelming. Succinct points

such as the 'Tip' and 'Caution' boxes that appear on most pages highlight points of direct clinical relevance (e.g. patients *in extremis* in whom anaesthetic induction with ketamine might, contrary to expectation, precipitate a decrease in arterial pressure).

Areas of emerging importance such as pharmacogenetics and pharmacogenomics are briefly covered, uniting theory with clinical practice. Malignant hyperthermia, porphyria (covered in detail reflecting the genetics of the authors' local population), and cytochrome P450 polymorphism are covered with great clarity.

Diagrams are plentiful and, for the most part, are well explained (e.g. those covering pharmacokinetics, pharmacodynamics, and feedback loops). However, others suffer from attempts to include as much information as possible and hence appear cluttered. The albeit complex *N*-methyl-D-aspartate receptor is littered with descriptive labels and packed into less than half a page, making it difficult to interpret. With more liberal use of colour, busy diagrams would have appeared clearer, but the limited palate of black, white, grey, and red leaves some images indistinct.

Classic UK trainee favourites such as *Pharmacology for Anaesthesia and Intensive Care* (Peck, Hill, and Williams) and *Drugs in Anaesthesia and Intensive Care* (Sasada and Smith) have for many years served FRCA examination candidates very well. Marketing a South African examination text in the UK market may seem optimistic on the part of the publishers. However, while not directly targeting a UK audience, this text would not be out of place in the personal libraries of any trainee. This single volume meets all the requirements for the FRCA examination—those preparing for the primary and final FRCA need look no further. We envisage that this text would be consulted frequently if acquired for both anaesthetic department and intensive care unit bookshelves.

A. G. Howatson\*  
D. M. Levy  
Nottingham, UK

\*E-mail: [alma@doctors.org.uk](mailto:alma@doctors.org.uk)

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