# BOOK REVIEWS

*John J. Downes, M.D., Editor*

**Guide to Immediate Anesthetic Reactions.** By J. WATKINS AND C. J. LEVY. London, Butterworth, 1988. Pages: 128.

The preface of this monograph states that its purpose is to provide "anesthesiologists, surgeons and other interested clinicians with a practical approach to the recognition, understanding and management of life threatening drug reactions" occurring during the course of anesthesia. Anyone involved in the administration of anesthetics should welcome such a book if it contained current, clear, concise information targeted to the practitioner. Does this monograph accomplish these aims?

The book consists of six chapters and an extensive appendix. The book opens with a brief introduction to immunology as it relates to anesthesia, and follows in chapter 2 with an overview of some possible mechanisms by which specific agents used in the course of anesthesia may cause life-threatening reactions. The recognition and the practical management of these life-threatening reactions are covered in chapters 3, 4, and 5. Chapter 6 deals with the topic of defects of enzyme function. The appendix is divided into five sections that, again, deal largely with diagnosis and management of anaphylactoid reactions.

Although I find the monograph somewhat disjointed and difficult to follow, it presents us with an interesting perspective of the scope of the problem of life-threatening reactions to anesthetic drugs and their management in the United Kingdom. The first two chapters illustrate the tremendous dearth of scientific information available on the mechanisms by which anesthetic drugs produce life-threatening reactions. Most of the references are pre-1985. The more recent work on nonimmunological drug-induced histamine release and the work of Vervloet on structure and immunogenicity of muscle relaxants should perhaps be included in a revision. There is considerable overlap of information presented in chapters 3, 4, and 5, but these chapters should be required reading for anybody giving any drugs to a patient. One of the strong points of this book is the emphasis on the practical management in these three chapters and in Appendix B. Chapter 5 and Appendix C deal with the laboratory investigation of reactions, but do not mention the RAST (radioallegosorbent test). Again, perhaps the revision will correct the oversight. The last chapter, although interesting, detracts rather than adds to the monograph. I fail to see the relationship between inborn errors of metabolism and immediate anesthetic reactions.

In summary, this monograph fulfills part of its goal. It provides anesthesiologists with a practical approach to the recognition and management of life-threatening reactions to anesthetic drugs and, as such, deserves a place on our book shelf.

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**Pediatric Anesthesia and Emergencies Reference.** By MEIR MAZALA. Cherry Hill, Mazala Medical Software, 1988. Price: $40.00.

*Pediatric Anesthesia and Emergencies Reference* is a computer program developed to calculate "normal" clinical parameters and average doses of standard and emergency anesthetic medications. It runs on an MS-DOS compatible computer with an additional handheld version available for a Texas Instrument TI-74 computer.

The program requires no installation and is not copy protected. Without the need for complex instructions, the program is easy to use for anyone who can turn on a computer; no previous computer experience is necessary to be comfortable with the program's use.

To use the program, the user need enter only the patient's age and weight. Infants require a comment on whether the baby is premature. Hematocrit is an optional entry. With this information, the program calculates several respiratory parameters, including laryngoscope blade and tracheal tube size, minute ventilation, and dead space. Maintenance fluids and acceptable blood loss to an hematocrit of 20–30% are also calculated, as well as commonly used doses of anesthetic medications, emergency drugs, and intravenous infusion fluid mixtures approximated on the basis of the patient's weight.

The program rapidly performs these varied calculations; a printed copy is easily obtainable. Twenty-three anesthetic medication doses are calculated for each patient. Similarly, 23 emergency medications and five infusion mixtures—six for the neonate—are also estimated for each patient. The drug doses and infusion rates are acceptable for most "normal" patients.

The calculation that I have the most difficulty with is the digoxin calculation. Although the loading dose is usually given in divided doses, only the total loading dose is noted on the screen or printout. Giving the total loading dose at one time may produce significant untoward effects.

Another difficulty with the program is the medication list presented for the premature infant. Although the premature infants are identified by the user, the program does not simplify the list of medications available to a listing that is more reasonable to the premature infant. It is, unfortunately, unclear to me to whom this program will be useful. The experienced anesthesiologist who routinely anesthetizes a wide spectrum of pediatric patients would have very little use for most of these calculations, since the doses of most medications are easily calculated. The anesthesiologist who infrequently anesthetizes children should only use the drugs that he or she is familiar with, not the multitude of drugs whose doses are calculated by the computer program.

Although the program repeatedly suggests that the doses should be modified by clinical judgement and experience, I fear that the inexperienced anesthetist may decide to use inappropriate drugs and doses based on the availability of the dosing information provided by the program, not on the basis of clinical judgement.

In summary, this software program accurately and rapidly calculates the doses of numerous medications that are available to the pediatric anesthesiologist. Anesthesia departments may find the program useful in their training program, since this software may be of use to beginning and inexperienced anesthesia residents who are overwhelmed by small children and appropriate medication dosing; with experience, its function will be minimal.

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