value of the book. Written for clinicians, it contains an enormous wealth of material not available in other blood banking texts. The author covers in depth the problems of supplying blood to the practitioner, stressing areas of transfusion practice particularly vulnerable to blood shortages (*e.g.*, cryoprecipitate for hemophiliacs), as well as problems of inventory control and outdating. In so doing, he provides the clinician with a readily understandable blood banker's rationale for use of blood components rather than whole blood. His discussions of the use of "universal donor" blood, plasma volume expanders, transfusion reactions, and compatibility testing are of particular value for the anesthesiologist. For those interested, I would recommend Chapters 2 and 3, which discuss the use of blood and blood components, Chapters 4 and 5, which discuss the blood groups and their relevance to the clinician, and Chapter 9, on the complications of blood transfusion. Chapters 7 and 10 deal with collection of blood and organization of transfusion services and may be useful to those directly involved with organization of a blood transfusion service and iv team.

Doctor Wallace is a British author and frequently cites the British Pharmacopeia and British transfusion practices. Although the basic concepts expressed are universally accepted, several specific practices are not applicable in the United States, *e.g.*, shelf life of CPD-stored blood is 21 days in the United States, compared with 28 days in Britian.

A few statements by the author can be criticized. For example, in his zeal for promoting the use of component therapy, he states that the use of packed erythrocytes reduces the amount of toxic substances transfused (*e.g.*, ammonia, potassium). This is true, provided the erythrocytes are prepared from whole blood just prior to transfusion, but is not usually the case since most components (platelets, fresh frozen plasma, cryoprecipitate) must be extracted from whole blood shortly after withdrawal from the donor. Because of this practice, packed erythrocytes are generally stored the same length of time as whole blood, and since erythrocytes are subject to the same storage lesion they will thus contain similar amounts of toxic substances.

Another statement concerning the transfusion of partially crossmatched blood in emergency situations is potentially misleading. The author states that partially crossmatched blood seldom leads to incompatible blood transfusion. This is generally true; but it must be remembered that there is potential for disaster with this type of transfusion practice, especially for those recipients who have had exposure to foreign erythrocyte antigens by way of either previous transfusions or pregnancies. A patient of this type receiving incompletely crossmatched blood will have a ten times greater risk of incompatible transfusion than those not previously receiving transfusions or pregnant. It must also be remembered that the majority of clinically significant antibodies are detected in the later stages of the crossmatch. Thus, it is unwise to transfuse partially crossmatched blood, especially to those patients who have had prior transfusions or pregnancies.

The author also contributes to the myth that transfusion of fresh blood will promote wound healing and fight infection. Like others making this claim, he fails to cite references that would substantiate this supposed benefit.

The clinician, whether it be anesthesiologist, internist, or surgeon, reading this book cannot help but profit from the great deal of information presented by the author. The reader must be prepared, however, to be frustrated by organizational problems, lack of references, and tendency toward monotony. One can only hope that in subsequent editions the author will make appropriate changes that would make this book a valuable addition to blood transfusion literature.

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Obstetric Anaesthesia and Analgesia. By DONALD D. MOIR. Baltimore, Williams and Wilkins, 1976. Pages: 293. Price: $23.95.

The stated goal of *Obstetric Anaesthesia and Analgesia*, by Donald D. Moir of Glasgow, is that it may help in preventing the death of even a single mother or child. Reflecting the organization of British medical care, it is aimed at the practicing anesthetist, the anesthetist-in-training, the obstetrician, the senior midwife, and even the consultant anesthetist who may wish to learn some of the recent developments in this rapidly growing area of medical practice.

The opening chapter is a brief, elegantly written summary of the history of obstetric anesthesia. In the traditional vein, the next two chapters are devoted to a review of the physiology of pregnancy and labor and of the pharmacology of drugs used in labor. The former, clearly and directly presented, suffers from the absence of any discussion of fetal physiology, treating only the mother. The chapter on pharmacology, with its comprehensive review of individual drugs, suffers from the lack of a unifying conceptual framework of perinatal pharmacology and pharmacokinetics. For example, the term "placental transfer" is used liberally throughout the book without a precise definition. The fetal/maternal concentration ratio of a drug at delivery is not necessarily an index of drug transfer from mother to fetus. It defines neither the rate at which a drug crosses the placenta nor the total amount transferred from mother to fetus. The reader is left with the mistaken impression that a great deal is known about such matters, whereas, in reality, there are relatively few quantitative data.

While the most important recent advances in obstetric care and in perinatal medicine reside in more effective antepartum and intrapartum diagnosis and treatment, these are outlined all too briefly in one short chapter by M. J. Carty, with little attempt at correlation with anesthetic management. If the anesthesiologist is to function as a full member of the perinatal health care team and as a consultant, more information than this is needed.

The strongest part of the book is the second half, dealing with clinical anesthesia. Here, Moir emerges in his role as advocate of the comfort and safety of mother and child. He correctly points out that no method of pain relief in labor (save perhaps the psychological) is entirely free of side effects. Further, he emphasizes the inefficiency, ineffectiveness, and hazards of reliance upon such drugs as the opioids. His description of the advantages, indications and technique of lumbar epidural block is well done, although somewhat different in detail from that generally practiced in the United States. A convincing plea is made for the reconsideration and more widespread use in the United Kingdom of subarachnoid block in obstetrics, while his critique of pudendal block is excellent, pointing out that pudendal block is frequently provided in the absence of the ability to do something better. He argues forcefully against the routine administration of general anesthesia for uncomplicated vaginal delivery and the provision of general anesthesia without endotracheal intubation. The description of the anesthetic management of cesarean section by either general or regional anesthesia is comprehensive, detailed, and up-to-date.

The American reader will find less valuable those portions of the text aimed at obstetric practice by midwives. In addition, obstetrics in Britain differs in other ways from that in the United States. For example, the management of the hypertensive disorders of pregnancy in the United States is primarily through the use of magnesium sulfate, while many other drugs and lumbar epidural block are much more frequently used in Britain. Low or outlet forceps are more frequently used in the United States. Many obstetric centers in the United States no longer routinely prescribe ergot alkaloids, owing to the high incidence of side effects and the lack of proven superiority over oxytocin. Not

so in Britain, despite Moir's clear and repeated descriptions of the side effects and complications. Chloroprocaine, undergoing a renaissance in the United States, is dismissed as "inconvenient" by Moir, perhaps reflecting differing modes of practice in Britain. In addition, Moir incorrectly ascribes the rapid breakdown of chloroprocaine to placental enzymes rather than to plasma pseudocholinesterase.

The final chapters of the book are devoted to a discussion of the anesthetic management of various complications of pregnancy and labor and to resuscitation of the newborn. The complications are briefly presented and dogmatism is avoided. The prevention and treatment of aspiration pneumonitis are presented in great detail, but Mendelson is described as a cardiologist, rather than as an obstetrician. Resuscitation of the newborn is dealt with briefly. Inexplicably omitted is any discussion of the significance of meconium in amniotic fluid and of the need for aggressive therapy to prevent the meconium aspiration syndrome in the newborn.

That there are problems in common on both sides of the Atlantic is made clear. Moir advocates the availability of epidural analgesia in all obstetric services, more participation by anesthesiologists in the care of obstetric patients, more extensive use of regional anesthesia for cesarean section, and the training of obstetricians in the administration of conduction anesthesia and the management of its complications. All of these issues are the subject of intense discussion and debate in the United States today, with the addition of the question of the role of nurse anesthetists in obstetric care.

The major strength of this book lies in its detailed description of safe, effective, and generally accepted anesthetic management of the obstetric patient, based upon the major clinical advances of recent years. The importance of avoiding the supine position, the use of antacids, and the putative advantages of newer local anesthetics are appropriately presented. For the beginner or for the individual who seldom cares for a pregnant patient, this book should serve as a convenient source of information. However, the lack of a serious attempt to relate anesthesia to perinatal medicine and to discuss the theoretical and admittedly controversial areas of perinatal pharmacology, in my opinion, makes the book less valuable for the serious student of this special area in anesthesiology.

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Metabolism of Volatile Anesthetics. BY E. N. COHEN and R. A. VAN DYKE. Reading, Mass., Addison-Wesley Publishing Co., 1977. Pages: 248. Price: $18.00.

The authors of this timely book are to be credited with a great deal of temerity. Capturing the essence of the subject of anesthetic biotransformation and toxicity in a single text at one period in time must be comparable to catching an airliner after it has left the airport! Important additions to this field are being made every week in numerous specialty journals of biochemistry, pharmacology, and toxicology, so that merely to collate an overview at one time is almost Sisyphean.

This text is an important contribution to clinical anesthesia, even though its full value to the day-to-day practice of the discipline may be clearer in the future than at present. Many conclusions regarding toxicity are now only in the animal phase and have not as yet been documented in man, although the possibility of correct extrapolation from the animal data is high. The style is quite readable and is not so esoteric as to preclude understanding by the clinical reader, yet is sufficiently comprehensive to appeal to individuals with some sophistication in the area of anesthetic biotransformation. Certainly the chapters concerned with laboratory techniques and assessments of anesthetic metabolism will give the clinical reader insight into the methodology employed in studies of this nature, while they may also serve as a primer for the young investigator in the field.

In summary, this is a well-written text and easily read book surveying the large body of data presently available in the subject. Typographical errors and errors of commission and omission are almost nonexistent. It is recommended for all anesthesiologists who wish to keep abreast of this rapidly moving aspect of the specialty.

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Review of Physiological Chemistry. 16th edition. EDITED BY H. A. HARPER, V. W. RODWELL, and P. A. MAYES. Los Altos, Lange Medical Publications, 1977. Pages: 681, Price: $13.00.

The editors' intent in this book is to produce a "concise presentation of those aspects of chemistry that are most relevant to the study of biology and medicine." The chapter organization and text reflect this, and the result is a textbook offering a unique view of introductory biochemistry. Most modern biochemistry textbooks are, to a large extent, molecularly oriented, usually being designed for a basic science curriculum. The "whole organ" or "systematic" approach used in this book should be very helpful to persons trying to relate clinical observations to biochemical mechanisms. It is also most valuable for pointing out, to the basic scientist, the clinical relevance of molecular events.

Since this book is subject to more frequent revisions than is common with biochemistry texts, assessment of its merit may be useful to the potential purchaser. The organization has been extensively changed from the preceding edition; reflecting the rapid increase in factual material now considered elementary biochemical information. For example, the chapter on nucleic acids and nucleoproteins has been divided and nearly doubled in length. A new chapter on elementary aspects of immunochemistry also appears, and certain sections are updated; for example, newer techniques of protein sequencing and synthesis are discussed. In contrast, the majority of the information appears to have changed little in content after the reorganization. Many tables and figures are, not surprisingly, unaltered. One aspect that it is hoped will never become obsolete is the current and reasonably extensive bibliography presented with each chapter.

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Life Support—The Essentials. BY J. S. REDDING. Philadelphia, J. B. Lippincott, 1977. Pages: 136. Price: $6.25.

Life Support—The Essentials is a paperbound introductory text designed for use by medical students, physicians, and nurses involved in critical care. The book is an outgrowth of a course in life support at the University of South Carolina School of Medicine. It covers such areas as respiratory physiology, airway management, care of the comatose patient, airway emergencies, respiratory therapy, and chronic obstructive pulmonary disease. There are also good chapters on pulmonary edema, drowning, shock, coronary-artery disease, acute respiratory distress syndrome, and cardiopulmonary resuscitation. One of the most interesting chapters considers snake and spider poisonings. The book concentrates on the basics of pathophysiology and manage-