laboratory aspects of hematopoietic stem cell transfusion, *i.e.*, collection, processing, purification, and storage of the stem cells. This chapter seems out of place in a monograph dedicated to erythrocyte transfusion. Actually, in several instances, steps are taken to remove erythrocytes from the stem cell preparation.

The chapters are well written and to the point. Occasionally, however, for the sake of conciseness the quality of presentation suffers, such as when all the complications of massive transfusion are squeezed into a three-page summary in chapter 9. Inaccuracies and questionable statements are few. An increase in hemoglobin concentration by erythropoietin administration decreases but does not "enhance" resting cardiac index in patients with end-stage renal disease (p. 171). Few would agree that the placement of a pulmonary artery catheter is beneficial in treating a patient with an acute hemolytic transfusion reaction (p. 191). Repetitions, despite the multiauthorship, are minor. For instance, transfusion problems in the immunoglobulin (Ig) A–deficient patient are addressed on pages 83 and 198; as to whether the transfusion criteria for autologous blood should be more liberal then for allogeneic blood is discussed on pages 153 and 169. Stylistic lapses are very rare ("the presence of fever can result in an unnecessary work-up for infection, which can result in the patient's being cultured and treated . . .," page 203). In three chapters (1, 10, and 11) the word *autogeneic* is used instead of "autologous" to refer to the patient's blood. Because this word was new to me, I looked it up in several medical dictionaries and could not find the word in any. Although *allogeneic* (*i.e.*, genetically dissimilar, although belonging to individuals of the same species) has legitimately replaced the word *donor* to qualify the origin of the blood, I see no need for a new word, in this case an etymological nonsense, to replace the perfectly appropriate word *autologous* (*i.e.*, derived from the same individual). The references are up to date and well chosen, a notable exception being the key reference to citrate toxicity during massive transfusion (p. 144).

This monograph, with its emphasis on blood bank issues and the laboratory aspects of transfusion medicine, is mainly written for pathologists and hematologists/oncologists. The practicing anesthesiologist will be better off in searching for answers to clinical questions elsewhere. In this respect, the American Society of Anesthesiologists booklet *Questions and Answers about Transfusion Practices* can be an excellent starting point. Finally, this monograph may find tough competition as a reference source in transfusion medicine, as in the intention of its editors, because very recently new editions of two major textbooks in this field have been released *Clinical Practice of Transfusion Medicine*, second edition (Petz DL, Swisher SN, Kleinman S, Spence RK, Strauss RG: Churchill Livingstone, 1966) and *Principles of Transfusion Medicine*, second edition, (Rossi EC, Simon TL, Moss GS: Williams & Wilkins, 1966). Instead of a book focused exclusively on erythrocyte transfusion, for just $50 more one can purchase an equally up-to-date textbook that discusses the whole spectrum of transfusion medicine.

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**Anesthesia for Cardiac Surgery, 2nd edition.** Edited by James A. DiNardo. Stamford, Appleton & Lange, 1998. Pages: 417. Price: $105.00.

The second edition of *Anesthesia for Cardiac Surgery* succeeds in updating the inclusive and informative first edition, published some 8 years previously. Significant changes include the fact that Dr. DiNardo authored 11 of the 13 chapters of the second edition. Nevertheless, this book is a prime example that a nearly "one-man show" can result in a fine textbook.

The first two chapters, "Preoperative Assessment" and "Interpreting Cardiac Catheterization Data," provide a systematic approach to the perioperative evaluation of pediatric and adult patients about to undergo open heart procedures. The combinations of anatomic illustrations combined with pressure-volume loops lend clarity to the presentation of relevant pathophysiology. In chapter 3, "Monitoring," a remarkably extensive discussion of transesophageal echocardiography is presented using multiple illustrations and pathologic conditions. The advantages and pitfalls of transesophageal echocardiography and the usual invasive monitoring techniques are well defined. A brief but informative section regarding thromboelastography punctuates this chapter.

Chapters 4 and 5 provide an informative background of and a common-sense approach to the treatment of adult patients with coronary artery disease and acquired valvular heart disease. Again, numerous diagrams bring clarity to these well-written chapters. Chapter 6, "Anesthesia for Congenital Heart Disease," is particularly well done, with the reader first presented with the management of a simple condition such as ventricular septal defect progressing to complex conditions such as transposition of the great arteries. Chapter 8 discusses the differing pathophysiologic features and the anesthetic management of pericardial effusion and constrictive pericarditis in an equally comprehensive manner.

Chapters 7, 9, and 11 are new to this edition and encompass some of the most important changes in practice with regard to technology. The management of one-lung ventilation and advances in mechanical support of the circulation in the setting of thoracic aorta surgery and lung or heart–lung transplantation is explored extensively. Chapter 11 also provides a sweeping presentation of mechanical circulatory assist devices that include devices as simple as the intraaortic balloon pump to those as complex as the total artificial heart. Chapters 10 and 12 provide a comprehensive presentation of the mechanics and management of cardiopulmonary bypass and myocardial preservation. Finally, the subject of neurologic injury in the setting of cardiopulmonary bypass and cardiac surgery is well presented by Dr. Bradley J. Hindman in chapter 13. Dr. Hindman provides a timely discussion of identified risk factors for neurologic injury and its management after cardiac surgery. Issues addressed include management of plasma glucose concentration and acid-base balance and manipulation of systemic arterial pressure, pulsatile *versus* nonpulsatile flow, hypothermia and circulatory arrest, and hemodilution.

There are only a few criticisms to be made of this otherwise excellent text. Although given a cameo treatment, the timely subject of "Fast-Track" anesthesia could have been discussed to a greater extent, given the growing body of literature and popular interest generated by those in cardiothoracic practice. The text tended to present a predominantly opioid-based anesthetic technique, with little variation be-

tween different pathologic conditions (*e.g.*, one anesthetic fits all). A paragraph or two about other viscoelastic monitors (*e.g.*, the Sonoclot Sienco, Inc., Wheat Ridge, CO) of hemostasis could have lent more balance to chapter 3. Finally, the text and tables are occasionally victim to typographic error, an example of which can be found in table 6-6, wherein the loading dose of esmolol for children is listed as 500 mg/kg intravenous.

The intended audience for this book includes anesthesia residents, fellows, cardiac anesthesiologists, and experienced anesthesiologists that do not care for cardiac patients on a regular basis. The focused, comprehensive prose and excellent illustrations contained in most of the chapters certainly provide a conceptual framework appropriate for anesthesiologists in training. Finally, I would recommend this text as a comprehensive review for experienced cardiothoracic anesthesiologists.

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