BOOK REVIEWS

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Neonatal Anesthesia. EDITED BY D. RYAN COOK AND JOSEPH H. MARCY. Pasadena, Appleton Davies, 1988. Pages: 262. Price: $52.50.

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Much of what justifies the identity of pediatric anesthesia as a separate and unique subspecialty of anesthesiology is concentrated in our youngest, smallest, and most vulnerable patients. Neonates, in their cardiovascular and pulmonary physiology, response to thermal stress, and pharmacokinetics and pharmacodynamics, are more than just small adults; they are nearly a different species. For this reason alone, *Neonatal Anesthesia,* a 12-chapter text from the staff at the Children's Hospital of Pittsburgh, is a welcome addition to the field.

The editors clearly had two goals in mind while compiling this monograph: the first was to establish the basic science foundation for the subspecialty, while the second was to provide a practical and up-to-date approach to the common clinical problems. The first goal was achieved in the initial six chapters, which deal with neonatal cardiovascular and respiratory physiology, thermoregulation, fluids and electrolytes, and pharmacology. The chapters on neonatal cardiovascular and respiratory physiology and on pharmacology, in particular, are well organized, written, and referenced, and are appropriately focused on the significant differences between neonates and older children or adults. The chapter on pharmacology reflects the editors' longstanding research interest and contributions in this area, and perhaps alone justifies the purchase of the book, since it should be required reading for students of this subspecialty.

By contrast was the chapter on persistent pulmonary hypertension, described as a "variant of congenital cyanotic heart disease that occurs in neonates with normal cardiac anatomy." I found this chapter in need of reorganization and editorial revision, with several confusing typographical errors. This subject would have been better included in an expanded section of the chapter on cardiovascular physiology.

The second half of the text deals with matters practical: "How to get it done;" or, more accurately, "How we do it," since this is a one-institution product. The editors have handled this issue well, presenting a well-rounded, well-referenced point of view. Subjects include anesthesia circuits, basic techniques (induction, maintenance, monitoring), common surgical conditions, neonatal resuscitation, and postoperative respiratory care. The final chapter deals with medical ethics, the most pertinent section of which discusses the troublesome issue of informed consent. I found these chapters to be well written and referenced, and potentially useful as a daily resource. The pages on the approach to common surgical conditions will likely become the most dog-eared.

The publisher has produced a nicely bound, compact book with clearly reproduced figures and easily read text. All in all, I have very few criticisms. I found it fascinating and somewhat objectionable that the electrocardiograph received three sentences, one of which read, "The electrocardiograph contributes relatively little useful information that cannot be gleaned from other methods," while mass spectrometry received two full pages. Surely, EKG monitoring, a backbone of our monitoring techniques, deserved equal time. I also would have liked a discussion of emergence from anesthesia and tracheal extubation as distinct entities, as was the case for induction of anesthesia and tracheal intubation; both induction and emergence are potentially hazardous times with various management options. Finally, I would have liked more discussion of the physiology of pain and its effects on the human fetus and newborn. This is certainly an appropriate topic in a text on neonatal anesthesia, given the recent controversy over the administration of anesthetic drugs to newborns. This is what second editions are for, however, and, given the overall high quality of *Neonatal Anesthesia,* I have no doubt that the text will stand that test of time. I highly recommend it for any practitioner of pediatric anesthesia.

Safety and Cost Containment in Anesthesia. EDITED BY J. S. GRAVENSTEIN AND JAMES F. HOLZER. Boston, Butterworths, 1988. Pages: 257. Price: $22.95.

In the Spring of 1987, Ohmeda funded an Anesthesia Patient Safety Foundation-sponsored multidisciplinary symposium of authoritative representative anesthesiologists, attorneys, insurance experts, manufacturers, and risk managers to examine many aspects of the question of safety and cost containment. The manuscripts from the workshop comprise this volume.

The 24 papers are divided into five categories: the nature of risk in anesthesia, financial and related impacts of anesthesia mishaps, improving anesthesia safety today and in the future, financial decision-making with respect to improving anesthesia safety, and current issues. Dr. Gravenstein synthesizes the results of the workshop in the sixth section.

The section on the nature of risk in anesthesia discusses the dangers of anesthesia. Cheney's "analysis of closed claims suggests that improved monitoring of the respiratory system with pulse oximetry and (end tidal) carbon dioxide analysis . . . would significantly reduce the incidence of anesthesia-related brain damage and death" in a cost-effective manner (mean $479,000 pay-out per case *versus* about $7000 to purchase the necessary monitors). Forrest's analysis of anesthesia outcome particularly helps nonstatisticians.

In the section on financial and related impacts of anesthesia mishaps, Plantes confirms many anesthesiologists' suspicions that malpractice premium payments comprise a larger percentage (8.7%) of an anesthesiologist's gross income than for any other medical specialty. Wood notes "catastrophic anesthesia claims damage a hospital's ability to attract patients and generate revenue" and account for 20% of total anesthesia claims and 50% of anesthesia loss costs. Bridenbaugh presents evidence that the cost of medicine is inversely related to the quality of care. He also shows that defensive medicine, at considerable cost, focuses health care on the risks of treatment rather than the risks of disease.

Holzer, in the section on improving anesthesia safety, demonstrates that the risk manager's responsibility to preserve an institution's financial assets is better accomplished by developing joint physician-hospital evaluation/loss prevention programs than by cleaning up after damage has occurred. Physicians and hospitals examine joint benefits, particularly when they are insured under the same policy. Duberman includes a particularly telling quote from Pierce, "No government official or hospital administrator would even consider flying on an airplane without up-to-date equipment and safety devices. What is the difference with anesthesia except that anesthesia deaths occur one at a time whereas in the airline industry they occur in large numbers at once?" The major savings produced by investments in anesthesia capital equipment come from reduced lengths of stay and service intensity costs produced by decreased anesthetic morbidity. Until Medicare and other major third party payers include capital related costs in prospective payments, hospitals have a window of opportunity to invest in capital equipment, at least until 1992, when the prohibition against