

## THE ANESTHESIOLOGIST'S BOOKSHELF

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**Cardiovascular Collapse in the Operating Room.** BY HERBERT E. NATOP, M.D., Assistant in Anesthesia, University of Illinois College of Medicine, and MAX SADOVE, M.D., Professor of Surgery (Anesthesiology), University of Illinois College of Medicine, Chicago. Foreword by WARREN H. COLE, M.D. Cloth \$6.00. Pp. 197, with 23 tables and 15 illustrations. Published by J. B. Lippincott Company, East Washington Square, Philadelphia 5, Pa., 1958.

This interesting monograph is a detailed summary of the problem of cardiovascular collapse (a terminology which the authors quite rightfully prefer to the ambiguous catch-all phrase "cardiac arrest"), particularly as it pertains to anesthesia and operation. The primary thesis is that there are almost always *multiple* predisposing and precipitating factors associated with cardiovascular collapse which occurs in the operating room, and that all such factors must be anticipated and rectified if tragedy is to be avoided.

The first chapter emphasizes the lack of a uniformly accepted definition for the term, "cardiac arrest," and the impossibility of comparing data based on this term for that reason. Chapter 2 is a fascinating review of the published reports of cardiovascular collapse in the operating room during the periods 1920 to 1942 and 1943 to 1956. In the former period, preoperative shock and serious infection were significant factors associated with cardiovascular collapse in the operating room; while in the latter period, due to the great increase in the number of intrathoracic surgical procedures, preoperative heart and pulmonary disease and operative hemorrhage have become the leading predisposing factors to cardiovascular collapse. The third chapter is an extensive review of the pathophysiologic states (hypoxia, hypercarbia, hypovolemia, anemia, hypotension, electrolyte disturbances, and certain reflexes) which appear to influence the operative and anesthetic course of the patient unfavorably, and the role of anesthetic agents in producing undesirable cardiovascular effects. Chapter 4 consists of an analysis and the protocols of the 33 cases of "cardiac arrest" occurring in the authors' own hospitals over a two and one-half year period: ether over-dosage (3 cases), toxic reaction to local agents (2 cases), hypoxia due to airway obstruction (4 cases), high spinal or epidural block (3 cases), excessive medication (1 case), reflex inhibition of the heart (2 cases), hypovolemic states—acute or chronic (8 cases), moribund states (3 cases), miscellaneous and unknown causes (4 cases), and "arrest" associated with neither surgery nor anesthesia (3 cases). The fifth chapter details the prevention of cardiovascular collapse in the operating room, particularly the preoperative preparation of the patient and the proper conduct of anesthesia. The final two chapters outline the methods of diagnosing and treating cardiovascular collapse when it does occur in the operating room.

There has been a virtual torrent of literature on the subject of "cardiac arrest" during the past decade or so, and a number of anesthesiologists will find that much of the material in this book is quite familiar to them. Some will question certain statements (i.e., the advocacy of rapidly induced anesthesia and apnea by the administration of intravenous barbiturate and muscle relaxant in the presence of a full stomach). However, the material is well organized and comprises an adequate review of the subject. The resident in training in anesthesiology and the occasional anesthetist will learn a great deal from this small book. It should be required reading for all surgeons, internists, cardiologists, pediatricians, and other physicians involved in the preoperative preparation or postoperative care of today's surgical patient.

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**Tracheotomy: A Clinical and Experimental Study.** BY THOMAS G. NELSON, Major, M.C., U.S.A.R. Cloth \$3.75. Pp. 111, with 47 illustrations. The Williams & Wilkins Company, Mount Royal and Guilford Avenue, Baltimore 2, Maryland, 1958.

Inasmuch as anesthesiologists are continually faced with problems of airway maintenance, it appears inevitable that a few will be forced to perform tracheotomy as