

BOOK REVIEWS

Circulation and Homeostasis. Medical Science Publication No. 3. Army Medical Service Graduate School, Walter Reed Army Medical Center. 367 pages. Paper \$1.25. U. S. Government Printing Office, Washington 25, D. C. March 24, 1954.

This symposium, conducted by thirty-eight outstanding figures in the fields of physiology, pharmacology, medicine and surgery (both clinical and experimental), biophysics and anesthesiology, as well as members from well-known cardiorenal, cardiorespiratory laboratories and research teams, brings up to date the current status and concepts of the various physiological mechanisms involved in the maintenance of the circulation and homeostasis. The lack of a basic understanding of the adaptive physiological mechanisms of man in various environments, and particularly when he is subjected to severe trauma and injury, led to this symposium which was given in October, 1953.

For purposes of review the volume may be divided into nine sections, each corresponding to the symposium conducted in nine morning and afternoon sessions. In the first section, the vascular architecture, the laws of physics governing flow in blood vessels, circulatory problems of cardiac and peripheral stress, and the chemical and molecular processes involved in contractile activity are discussed.

The second section deals with various means of evaluating the performance of the heart and peripheral circulation, the transfer of water and other substances across capillary walls, circulation and metabolic exchange, renal function in electrolyte and water balance and the humoral and

neural mechanisms of circulatory control.

The third section is concerned with the collateral circulation of the lungs, heart and periphery as well as techniques of cardiac catheterization, red cell and plasma volume, and the blood flow in muscle, as measured by the clearance of radioactive substances.

In the fourth the uses and abuses of cardiac catheterization, the metabolism of the human heart *in vivo*, and studies of uterine circulation in the rabbit are discussed.

The fifth section deals with renal circulation, cerebral circulation, management of cardiac arrest, use of intra-aortic balloon catheter tamponade, and cardiorespiratory problems during thoracic operations.

The sixth is concerned with the lymphatic circulation and the functions of circulation related to internal and external movements of heat.

In the seventh section, normal physiology of respiration, the physiology and peculiarities of pulmonary circulation, the treatment of pulmonary diseases, and circulatory and respiratory adjustments to altitude, acute and chronic, are discussed.

The eighth section deals with experimental studies on hemorrhagic shock, with observation of intra-arterial versus intravenous infusions and insufficient coronary flow and left ventricular failure in late shock, circulatory responses in stress, the current status of plasma expanders, and concepts on etiology and mechanisms of atheroma.

The ninth and final section is concerned with the current status of thinking regarding shock, circulatory changes during anesthesia and hemorrhage, the effects of trauma and op-

erative procedures on circulation, problems of blood volume in the seriously wounded, experimental studies in shock, and wound ballistics.

Many diagrams and drawings are included to record experimental data, and 160 references are presented. This book contains a wealth of current information and should be in every anesthesiologist's library.

ROBERT B. PENNINGTON, M.D.

Compilation of Paintings on the Normal and Pathologic Anatomy of the Reproductive System. By FRANK H. NETTER, M.D. Edited by ERNST OPPENHEIMER, M.D. 286 pages. Ciba Pharmaceutical Products Inc., 1954.

This book is a great deal more than a compilation of paintings of the normal and pathologic anatomy of the reproductive system: it is a volume of 286 quarto pages serving as the corner stone of medical information leading to what may very well be considered to be the equivalent of a thorough course in the anatomy, physiology and pathology of the reproductive tract of the male and female. The signature of Frank Netter, M.D., affixed to each painted plate will suffice to recommend it to those specialists and interested people working in the area of human reproduction. Associated with the artful ingenuity of color and composition of Dr. Netter's morphological depiction is the incorporation of fourteen scholarly written treatises by numerous specialists in the fields of gynecology, pathology, and anesthesi-

ology, all carefully blended together in a photographic-literary essay under the expert editorial guidance of Ernst Oppenheimer. Each specialist has performed a very valuable contribution in writing a thorough essay in his respective realm of information.

This monumental work opens with a foreword by Dr. John Rock, and on one page he sets the stage for the dynamic stories and paintings that follow. Fourteen sections embrace the major theme and were contributed by Drs. N. S. Assali, Albert Decker, Joseph A. Gaines, Charles F. Geschiekter, Robert A. Hingson, George W. Mitchell, Jr., Josef Novak, I. C. Rubin, S. H. Sturgis, Samuel A. Vest, Pearl M. Zeek, and the editor Ernst Oppenheimer. Of particular significance to anesthesiologists is the contribution by Robert A. Hingson on the neuro-pathways in parturition. In this section a comprehensive understanding of the topographic locations and specialized functions of the neuro-afferent pathways to the many organs and structures involved in the process of birth is presented.

Critically evaluated, this volume will be an outstanding leader in its field. The statements throughout the text are accurate, and the paintings were made from actual specimens. The style and effectiveness of the literary composition is clear, concise, and extremely interesting. Finally, grateful acknowledgment is made to Ciba Pharmaceutical Products, Inc., for making possible this magnificent volume.

JOSEPH T. VELARDO, PH.D.