

BOOK REVIEWS

Operative Surgery—Including Anesthesia, Pre- and Postoperative Therapy, Principles of Surgical Technic, Blood Transfusion and Abdominal Surgery. Edited by FREDERIC W. BANCROFT, A.B., M.D., F.A.C.S., Associate Clinical Professor of Surgery. Columbia University. New York. Price, \$10.00. Pp. 1102, with 514 illustrations. New York: D. Appleton-Century Co., Inc., 1941.

The editor of this large book has brought together into one text the ideas of many well known surgeons of the United States and Canada which until this time could be found only in the numerous medical journals. It is a compliment to Anesthesiology that the editor invited six anesthesiologists to contribute an entire section of 154 pages to the book. Of further interest to anesthesiologists is a section on preoperative and postoperative therapy and one on blood transfusions.

In the section on Anesthesia, Pre-anesthetic Medication is discussed by Donald E. Brace. He sets forth the purposes of the medication citing Guedel's theories as the basis for the modern scientific approach to the problem of preanesthetic medication. Derivatives of opium, members of the belladonna group, and the barbiturates are described in detail as to their pharmacologic action and clinical use. Waters' evaluation of some of these drugs is given.

Sidney C. Wiggin prepared the chapter on Inhalation Anesthesia. A working definition of inhalation anesthesia is "the control of reflexes by the balanced action of the anesthetic with oxygen, producing abolition of all reflexes except the vital ones of respiration and circulation." He traces

briefly the progress which allowed the perfection of equipment and states the principles upon which modern technic depends. Guedel's book on the physical signs of inhalation anesthesia is praised as a guide for the safer and more scientific administration of inhalation agents. The author states that the developments have made it possible to exclude the more toxic agents, to perfect use of the less toxic agents and to increase the use of the gases, especially cyclopropane, which has no apparent harmful after effects on any vital organ.

Preparation of the patient is stressed, after which a detailed description of the well known inhalation agents is presented, including technic of administration. Advantages and disadvantages are stressed and hazards of explosion are described with suggestions for diminishing them.

Discussion of common complications of inhalation anesthesia and complications peculiar to the various inhalants concludes the chapter.

In a short chapter Paul M. Wood considers Rectal Anesthesia by tracing the history of rectal administration of anesthetic and analgesic agents. Physiology of rectal anesthesia is explained; the present day agents are listed and practical techniques are suggested. The advantages and disadvantages are enumerated, then some specific formulae in common use are presented.

The chapter on Intravenous Anesthesia by R. Charles Adams presents a concise view of a newer method of anesthesia which still continues to displace other methods of general or regional anesthesia for relatively short operations. A plea is made for its rational use only by skilled and experienced physicians, and the author states

that when correctly administered in selected cases, it is as safe as inhalation or spinal anesthesia. Illustrations of equipment and technic of administration show clearly the simplicity of its preparation and methods of administration. The untoward systemic effects are described as being limited mostly to the respiratory system, but it is suggested that caution be used in administration of intravenous anesthetic agents to patients with hepatic or renal disease.

The indications for intravenous anesthesia open a wide field and the use of combined anesthesia is favored for some operations; for example, combining intravenous anesthesia with regional anesthesia and administration of oxygen.

Precautions are set forth and should be rigidly adhered to in order to avoid complications, including medico-legal implications, during or after anesthesia. Resuscitation is described.

The chapter on Spinal Anesthesia by Harry J. Shields outlines interesting historical considerations, then presents anatomic and physiologic aspects followed by detailed information concerning the agents used as anesthetic drugs. Indications, contraindications, management of the patient, technic of administration and complications of spinal anesthesia follow one another in a logical sequence. Diagnostic and therapeutic uses of spinal anesthesia are mentioned.

Regional Anesthesia by Henry S. Ruth is an excellent chapter and occupies almost half of the entire section on anesthesia. It is the type of anesthesia which surgeons are most apt to use themselves and thus warrants full discussion in a surgical text. Regional anesthetic agents are described fully as to properties and use. Vasoconstrictors are dealt with in the same manner and untoward reactions from both are included. Instruments and containers needed are specifically discussed and

general principles of technic for regional procedures are set forth. Definitions of the various types of regional procedures are given; then the author ambitiously and completely includes technical description of regional blocks for the entire body. The descriptions and illustrations are so lucid that one could use this chapter as a manual for regional anesthesia.

Section II is an excellent discussion of Preoperative and Postoperative Treatment by Alfred Blalock. He considers the problems which arise in normal and abnormal groups of patients; this latter group including infants, the aged, the obese and those with major diseases not related to the surgical problem. Fluid and electrolyte disturbances are presented clearly and specifically, particularly as to minimal requirements. The type of fluid and electrolyte for various conditions is mentioned as are the routes of administration. Acidosis, alkalosis, hypoproteinemia, and hypovitaminosis are all discussed and methods of prevention and treatment are given. The newer methods of treatment for shock and peripheral circulatory failure differ from those found in standard texts published only a few years ago. The use of adrenal cortical extract, drugs, whole blood, plasma, serum, and blood substitutes or fluids is evaluated as well as other aspects of treatment which must include heat, venous return, hemostasis, anesthesia, and oxygen. Postoperative complications are reviewed briefly and newer types of treatment are discussed. They include the use of anticoagulants for the prevention and treatment of thrombosis and embolism, and the blocking of regional sympathetic nerves with procaine hydrochloride in the treatment of thrombophlebitis. A discussion of pulmonary, abdominal, and urinary tract complications concludes the chapter.

The third section by Rufus E. Stet-

son deals with Blood Transfusion and includes a brief historical section. One is somewhat disappointed and confused by the detailed description of technique and equipment of direct blood transfusion with a trained three-person team, as well as by a technical discussion of the method used by pharmaceutical firms for drying plasma.

The interesting story of preparing a plasma-saline mixture for use by the British in war-time is told but the citrate method of indirect transfusion and the use of blood banks are passed over briefly. The controversy over the use of plasma and serum is presented but the author believes that further work must be done before the superiority of one is demonstrated.

The remainder of the book is of primary interest to surgeons and any attempt by an anesthetist to review it would be inadequate. For this reason only the first 237 pages are covered in this review.

CURTISS B. HICKCOX, M.D.

Anaesthetics Afloat. By SURGEON LT. COMDR. RONALD WOOLMER, R.N.V.R., B.A., B.M., B.Ch. (Oxon.), D.A. Price 6/-net. Pp. 120 with 18 illustrations. London: H. K. Lewis and Company, Ltd., 1942.

This monograph, written in a concise manner, will prove valuable to many young surgeons who are confronted during wartime with the problem of inducing safe and satisfactory anesthesia without the assistance of personnel who is experienced in this field of

medicine. The author, realizing the risk involved when the operator must be anesthetist and surgeon at the same time, has presented methods of anesthesia most suitable for this condition.

The chapters on preoperative examination and preparation of the patient are particularly well written and are in general agreement with practices in this country. The administration of open ether is treated in detail, as it should be, and many practical hints on its conduct are offered. Nitrous oxide, ethyl chloride, and chloroform are given little space. The chapters on spinal analgesia and intravenous anesthesia are very complete in the presentation of techniques. However, the reviewer suggests that considerably more stress should be placed on the mishaps that can occur with these forms of pain obtundation in order to avoid the impression that little danger attends the use of these methods. Many will disagree with the recommendation that if symptoms of shock develop during the course of spinal analgesia, light ether anesthesia is the best treatment.

A chapter describing methods of resuscitation would not be out of place in a treatise of this nature. It could wisely devote as much attention to technical detail as has been accorded the anesthetic methods which are not infrequently responsible for producing respiratory arrest.

The reviewer enjoyed the book, and the author is to be congratulated for presenting so much valuable information so briefly and simply.

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THE CONVICTION OF AN OBSTETRICIAN

"In the delivery of these patients [presenting Bandl's Ring] a few things are essential: a patient unexhausted, avoidance of haste, a little obstetric judgment, and the assistance of a medical anesthetist. If the anesthetist is familiar with obstetric procedure he can not only produce surgical anesthesia but give invaluable assistance." *Texas State M. J.*, December, 1941.