

tion is thereby condensed into a small area. As a consequence, however, it makes for intensive reading. The organization in some respects seems confusing. For example, the absorption technique is outlined in the center of the section on agents just before the material on cyclopropane. The types of apparatus are put in the section dealing with nitrous oxide. Pethidine (demerol-meperidine) is included in the section on intravenous anesthetic agents.

The section on regional anesthesia is rather extensive, but suffers from an almost complete absence of illustrations.

The book, however, is an excellent addition to the library of the medical student who wants concise information, is a very useful source of detail for the physicians studying for qualifying examinations such as the American Board of Anesthesiology or the American College of Anesthesiologists, and is a handy but limited reference text for the full- or part-time practicing anesthetist.

STUART C. CULLEN, M.D.

*The Principles of Thoracic Anesthesia—Past and present.* By WILLIAM W. MUSHIN, M.A., M.B., B.S., M.R.C.S., F.F.A.R.C.S., D.A., Director of Anesthesia, Welsh National School of Medicine; Consultant Anesthetists, United Cardiff Hospitals; Consultant Adviser in Anaesthetics, Welsh Regional Hospital Board; formerly First Assistant, Nuffield Department of Anaesthetics, University of Oxford, and L. RENDELL-BAKER, M.B., B.S.(Lond.), M.R.C.S., D.A., Consultant Anaesthetist, United Cardiff Hospitals and Welsh Regional Hospital Board; First Assistant, Department of Anaesthetics, Cardiff. Springfield, Ill., Charles C Thomas, 172 pages, 217 illustrations. 1953.

This reference book was written to present the principles of thoracic an-

esthesia and the numerous difficulties encountered by anesthetists in the past, as well as a challenge to the future thoracic anesthetist.

The subject matter is divided into 3 main headings: I, The Pneumothorax Problem and Its Solution; II, Historical Background; III, Methods in Use Today. There is an ample index, the type is plain and easy to read, and the biographical notes at the end of the book are excellent. The subject matter is discussed fully and well presented; the bibliography is complete and chronological.

All anesthesiologists would profit by reading this book.

KENNETH K. KEOWN, M.D.

*Cerebral Anoxia.* By CYRIL B. COURVILLE, M.D. Pp. 225, illustrated. San Lucas Press, Los Angeles, 1953.

This book, published in the form of a text, is written by the author of many previous publications concerning the effects of anoxia on the central nervous system. In this present book he has included some of these previous publications and has added to them two newer essays dealing with the same subject. Dr. Courville is well qualified to speak on the subject of cerebral anoxia. For more than twenty years, in his capacity as director of the Cajal Laboratory of Neuropathology, he has been able to study autopsy specimens obtained from various types of fatalities involving anoxia.

In the initial pages of his book the author traces the history of asphyxia, citing legends and myths indicating that, from the earliest times, man has been aware that death could result from situations where there was deprivation of air. We now recognize these phenomena as being due to anoxia.

In a following chapter, case studies are presented. Each represents a fatality resulting directly from an anoxic

episode or one in which there was a known episode of anoxia in the past history. A variety of neuropathological lesions were thus demonstrated and described in considerable detail, both as to their gross and microscopic appearance. It is interesting that many portions of the brain were affected by anoxemia. Depending on the severity of the anoxic episode, cortical lesions varied from focal or generalized loss of nerve cells to subtotal cortical necrosis. The white matter exhibited cystic degeneration and incipient demyelination; the basal ganglia demonstrated focal softening of the globus pallidus.

Using the case studies as a foundation for further discussion, Dr. Courville attempts to explain the mechanisms of their occurrence. He cites numerous references to experiments on animals in which different techniques were used to produce cerebral anoxia. In almost every case, lesions similar to those found at human autopsies could be produced in animals. It is in this phase of the discussion that certain extraneous factors manifest their importance. The cerebral lesion found at autopsy following an anoxic episode depends on the severity of the anoxia, its intensity and its duration. It also depends on the length of the recovery period, if any, following the anoxemia, since it is known that these lesions are progressive to some extent. Perhaps the most important factor influencing the development of cerebral lesions is the cerebral circulation and its status and

behavior during and following the anoxic episode. It is the author's opinion that the circulatory factor predisposes the site of the cerebral lesion. He postulates two mechanisms by which this occurs; one, vasodilatation and stasis, and two, vasospasm. He further suggests that the proliferation of the vascular endothelium follows, resulting in the formation of new but inefficient blood vessels. Vascular occlusion results and the original damage from anoxemia *per se* is accentuated.

In the last portion of his book, the author sets forth the theory that many of the bizarre diseases of the central nervous system occurring in infancy and early childhood may be the result of paranatal asphyxia. He was able to demonstrate similarity between the nervous system lesions of these infants and children and the lesions resulting from anoxia observed both clinically and experimentally. It is, therefore, obvious, that if this hypothesis is true, a great step forward in the attack on these diseases has been accomplished.

This text proves to be interesting reading. It is well illustrated with black and white photographs of gross and microscopic brain lesions. Because of the author's long experience in this field, and because this text contains his original publications in addition to his more recent work, it should stand as a reliable reference on the subject of cerebral anoxia.

EDMUND F. WELCH, M.D.