THE POSTNATAL DEVELOPMENT OF THE HUMAN CEREBRAL CORTEX Vol. VII. The Cortex of the Four-year Child. By J. LeRoy Conel. (Pp. 309; 98 plates. 120s.) Cambridge, Massachusetts: Harvard University Press. London: Oxford University Press. 1963. These volumes are well known to students of the brain. They have confirmed that at the time of full-term birth the human cerebral cortex has the maximum number of neurones it will ever have. This study, however, presents the increasing complexity and maturity of cells during the early months and years of life and provides a fantastic picture of progression which must be considered by all those who study the physiology of psychological development. This volume demonstrates substantial changes as compared to the brain at the age of 2 years and it is to be hoped that these important studies can be continued to include later ages.

W. RITCHIE RUSSELL


A comprehensive study of the cerebral palsies of infancy involves discussions between specialists and scientists of widely differing interests. This volume reports the papers presented at an important seminar held in Paris in 1961. It contains many authoritative contributions which should be studied by those interested in this difficult field.

W. RITCHIE RUSSELL


This book is a useful practical guide to convulsive disorders in childhood. It is a valuable addition to Bridge’s ‘Epilepsy and convulsive disorders in children’, for so long pre-eminent in this field. Both are clearly based on wide personal experience, and each carries to some extent the stamp of its place of origin, the Mayo Clinic in the present volume and the Boston Children’s Hospital in the former.

CONVULSIVE DISORDERS IN CHILDREN, Volume 81 of Bibliotheca Paediatrica, which is of interest to neurologists and paediatricians in this country, largely because of the difficulties of enforcing it. This further assessment of its usefulness based on facts and figures is welcome. It is on the whole largely in agreement with earlier findings. Other forms of treatment, including surgical, are also reviewed. The general management and supervision of the activities of children with seizures is an important part of the doctor’s role. This is mentioned, but could be more fully treated with advantage. The hereditary aspect, which naturally causes special concern to most parents, is discussed; and the conclusion, with which most clinicians will agree, is that epilepsy is the additive effect of several genes rather than a genetic entity. Of course for the actual emergence of a given seizure special environmental factors may also be required. An adequate selection of references to the literature is given. They are sufficiently numerous to justify an author as well as a subject index. The book will be of special value to neurologists and paediatricians. Its price in this country is unhappily high.


Only the close friends of the author of this book know that behind a modest and sincere manner there lies an unusual ability, wit, and clarity of vision. Dr. Matthews is the neurologist to a large provincial community and he knows very well which are the problems that are of most practical importance. His presentation is quite brilliant and by the constant effervescence of a particularly appealing variety of humour he has produced a ‘best-seller’. This is what medical student and general physicians should read about neurology, but even the sophisticated neurologist will scan these pages with relish and advantage.

W. RITCHIE RUSSELL


In this volume are published the proceedings of the Second Symposium on Research in Muscular Dystrophy organized by the Muscular Dystrophy Group of Great Britain and held in London in January 1963. The book is divided into four sections, devoted respectively to clinical and genetic, pathological, biochemical, and electrophysiological research. In each section there is an introductory paper given by an eminent authority and these are followed by original communications and by a full transcript of the discussion which followed. The volume contains much that is of interest, not only to the
research worker, but also to the neurologist and paediatrician concerned with the care and investigation of patients suffering from muscular dystrophy or from related diseases. Of particular interest to the clinician are papers upon the detection of carriers of the gene responsible for the Duchenne type muscular dystrophy and upon infantile hypotonia, but he will also learn from this volume of the methods being utilized in an attempt to elucidate the pathogenesis of the disease. Much that is new has been learned in recent years, particularly in the fields of histochemistry, electron microscopy, and biochemistry, and enzyme studies seem likely to be particularly fruitful in the future. This volume has been produced very quickly, possibly at the cost of some lack of definition in certain illustrations, but it can be confidently recommended to anyone who wishes to read a topical review of current research and to keep abreast of recent advances in knowledge of the muscular dystrophies.


This book contains the Proceedings of the Neurochemical Symposium at the VII International Congress of Neurology in Rome in 1961. As indicated by the editors in their preface, study of lipid abnormalities in pathological conditions must take account of the fact that the lipids of living tissues are combined with proteins as lipoproteins and proteolipids. The first part of the symposium is therefore concerned with the physicochemical aspects of lipid-protein complexes. Among several articles dealing with brain proteins, Dr. Folch-Pi has contributed an up-to-date account of work on brain proteolipids. Other topics discussed include the ultrastructure of myelin and a ganglioside system found in brain.

The second half of the book is devoted mainly to articles on the histological, histochemical, and chemical features of post-mortem material from cases of leucodystrophy, and contains much useful information and discussion. Dr. L. Svennerholm, in an excellent article on the biochemical changes, gives results of lipid analyses on a number of cases. Other papers include a discussion on the relationship of the metachromatic form of leucodystrophy to lipidoses and other metabolic disorders, and contributions by leading authorities on Pelizaeus-Merzbacher disease.

Although the standard of contributions is somewhat variable, this book contains some useful reviews of the various topics discussed.


Clinicians and neurophysiologists will welcome this long-awaited second edition of what has been a standard work in E.E.G. for over 10 years. The various sections have been revised and extended in accordance with the considerable advances in the subject and there are four new contributors. D. A. Pond deals with the development of normal rhythms and the E.E.G. in paediatrics; J. A. V. Bates discusses the value and limitations of special investigatory techniques. The section on biochemistry has been revised and enlarged by Professor McIlwain; and E. G. Walsh has joined Professor Whitteridge in rewriting the physiology section. The main emphasis is on clinical aspects but the book retains its original comprehensive character though some selection of subjects has been inevitable and pharmacology has been omitted. Extensive references are again a feature and it is a pity that few later than 1959 could be included. The work merits a more attractive format, particularly in view of its assured future in the literature of clinical neurophysiology.


The second of this important publication is concerned with clinical and physiological applications of the subject. After careful analysis of the stereotactic techniques, the anatomy and applied physiology, the later chapters consider the therapeutic implications and results. This is chiefly concerned with surgery of the basal ganglia for extrapyramidal syndromes, but there are also sections on the relief of pain and the relief of mental disorders. Of special interest is the possible application of these techniques to the study of epilepsy. This volume will be widely studied by all those engaged in this field of research and surgical treatment.


Until quite recent years the problems of physics and dynamics concerned with injury to the brain in cerebral commotion has been a matter for theoretical calculation. Now, however, so many physical items can be measured experimentally that at last most problems can be solved. Experimentally, acceleration-concussion of constant degree can be delivered by a concussion-gun, while the changes in intracranial pressure can be recorded at several different points. Accelerometers may be used to study the dynamics of skull movement, while high speed cinematography can be used to study, through a transparent inlay in the skull, the movements of brain convolutions. The authors of these studies are to be congratulated on their success in exploiting modern recording techniques to clarify many old problems which are of
ever increasing importance at the present day: the studies of repeated cerebral concussion are of special interest.

W. RITCHIE RUSSELL


It is sometimes asserted that scientific interest and therapeutic endeavour are incompatible. In fact, the development of a therapy is often the stimulus to new scientific exploration. The introduction of intermittent positive pressure respiration by Lassen and Ibsen in 1952 in order to cope with the overwhelming epidemic of poliomyelitis in Copenhagen illustrates this well, for it has initiated a great deal of research on the physiology of respiration and of the circulation in man.

The present excellent volume gives an account of the therapeutic and scientific work of the Respiratory Unit in Oxford. It sets forth with admirable clarity the practice of artificial respiration, omitting no medical, nursing, or physiotherapeutic detail and supporting it with excellent illustrations. It goes on to describe their researches into the physiology of artificial respiration and the effect this has on gaseous exchange and the circulation. This is not expressed in the current technical jargon, which is unintelligible to all but the initiated, but in simple English which can be understood by all. The special considerations relevant to the management of poliomyelitis, polyneuritis, and tetanus are discussed as well as those appertaining to such less common conditions as chest injury and status epilepticus. The apparatus required for this kind of work is listed and the names and addresses of the suppliers given. Indeed, the authors appear to have thought of everything for they round off with an explanation of the symbols and abbreviations used by pulmonary physiologists together with references and a good index.

It is in all a first-class monograph and will be indispensable, not only for those engaged in this type of work, but also for those who may be called upon to see a patient in whom respiratory failure may threaten and about whom they may have to advise.


This monograph concerns clinical and E.E.G. observations on 27 patients with stagnant anoxia (after hanging or cardiac arrest) and 47 patients with carbon monoxide poisoning admitted to hospital during 1948-58 in Copenhagen. Neurological and limited psychological and pathological findings are reported, and an effort has been made to assess the prognostic value of the E.E.G. after acute anoxia. There is much of interest from both clinical and E.E.G. aspects and a comparison of the two types of anoxia has been rewarding. However, there are the usual difficulties with retrospective studies, e.g., limitations in number and timing of E.E.G. recordings, and more comprehensive psychological and follow-up data would have been helpful. Such limitations are important in view of the author's conclusion that the E.E.G. has little practical value after acute anoxia.


The papers contained in these two excellently produced volumes give a balanced survey of the wide field covered by present-day research into the problems of mental retardation. The organic, biochemical, psychological, sociological, and therapeutic aspects of the subject are well represented. The organizers of this conference had invited a number of speakers to give lectures on themes of their own choosing, so that there are several more substantial contributions than are usually found in conference records of this sort. It is to be hoped that these proceedings will find their way not only into medical libraries but also into the hospitals for the subnormal in Britain, where the stimulus of research activities is so seldom available.


This is the tenth edition of Tredgold's well-known textbook which appeared first in 1908. Eight contributors, all from University College Hospital, London, now cover the clinical, social administration, psychological, and biological aspects of mental deficiency. The presentation of the material is not always well balanced; very little space, for example, is devoted to the recent discoveries of cytogenetics by comparison with the long exposition of the controversial view that 'the psychoses of childhood are properly to be regarded as psychological deficiency diseases resulting in disorders of relationship formation'. Nonetheless, room is found in 530 pages for reference to most features of the subject and the book can serve as a useful introduction to an important and rapidly expanding branch of medicine.


This book consists of the proceedings of the second series of seminars on mother-infant interaction organized by the Tavistock Clinic. It is subdivided into three parts, dealing in turn with animal studies, human studies, and problems of method and theory. Intensive observation of a small number of subjects, monkey and human, form the basis of the reports; the discussions lean heavily on ethological and psycho-analytical theory. The conclusions are inevitably tentative and the symposium is best viewed as an early stage in the development of an important field of study.