Book reviews

(1) BASIC RESEARCH IN MYOLOGY Edited by B. A. Kakulas. (Pp. 698; illustrated; $57.30.)

Twenty years ago a major charity was unable to interest our senior neurological centre in a grant for research into muscular dystrophy. Since then the disorders of muscle have been the biggest growth area in neurology. It is becoming difficult to keep pace with the growth of new knowledge. When previously recognized diseases are shown to be syndromes of possibly diverse pathology and aetiology it becomes necessary to examine criteria. It is now certain that almost identical clinical pictures may have widely differing pathological pictures. Conversely the histological appearances of 'polymyositis' may be found in diseases believed to be hereditary. A reclassification of muscle disease is overdue but we must have a decision on the basis of classification—clinical, pathological, or aetiological—it matters not which so it be consistent.

Despite the undoubted advances, the key problem—Duchenne type muscular dystrophy—remains an enigma. A respectable strategy in the advancement of science is the building of models. While biochemistry continues to find itself in blind alleys some old models are being toyed with. A vascular hypothesis is revived because of supposed histological similarity between hereditary myopathy and certain ischaemic types. But the main enthusiasm is for the concept that the muscle disease is due to failure of a 'neurotrophic factor'. (The logic of this model demands that we classify mitral stenosis as a streptococcal disease.) There are two main supports for this model. The first, the occasional finding of myopathic changes in denervated muscle, bears the implication, far from validated, that histological criteria define specifically a difference between myogenic and neurogenic disorder of muscle. The second strut of the neurogenic model is based on a supposed reduction in numbers of motor units in affected muscle, claimed by one research group whose technique is currently under attack. It is, in fact, rare in the muscle literature to find a recognition that there is still no satisfactory evidence for the existence of neurotrophic substances. Unexplained phenomena abound, but it is premature to introduce a mystical substance until recognized mechanisms must be excluded. We have combustion without phlogiston and gravity without the ether but have little cause to smile at our predecessors until neurotrophic substances are more firmly established than at the time of writing.

The two volumes of papers read at the 2nd International Congress on Muscle Diseases in Perth, Australia in 1971 provide an excellent record of what must have been an outstanding meeting. Published proceedings masquerading as systematic textbooks are increasingly under attack but these books are indispensable for all workers in the field. Papers are grouped as clearly indicated in the titles of the books. They are well-edited and produced. But the outstanding feature is the verbatim account of general discussions by first-class chairmen and led by invited speakers. These discussions are extremely interesting and provide an excellent entry into the formal papers and link between them.

J. A. SIMPSON


Dr. Spillane has successfully brought together in this volume contributions from Africa, Asia, the Pacific, South America, and the West Indies. His own introduction is excellent reading, beginning with a historical review and then turning to some specific present day 'geographical' observations. He concludes by setting out what he believes are the important tasks confronting the neurologist in tropical medicine.

The subsequent chapters are for the most part accounts of the incidence of known neurological disorders in different parts of the world written by local neurologists and neurosurgeons. In a few chapters particular subjects are considered in more detail. Then there are chapters devoted to tuberculosis of the nervous system (Tandon and Pathak: India), parasitic disease (Gelfand: Rhodesia), porphyria and multiple sclerosis in South Africa (Dean), and leprosy (Pettit: Malaya). It is well known that the frequency of multiple sclerosis varies considerably from one part of the world to another but there are
other equally puzzling neurological riddles: the high incidence of intracranial arteriovenous malformations in patients with subarachnoid haemorrhage in South East Asia; the high frequency of nasal encephalocoeles in Asia; the high incidence of meningioma among intracranial tumours in Africans.

Neurologists will find this a stimulating book and will realize only too clearly how much we all have to learn about disease in countries other than our own. It is not, of course, without its applications here and spinal tuberculosis among immigrant populations in this country may take the neurologist by surprise. Most neurologists will enjoy reading this book, although all will want to read particular chapters and all will want to have it available for reference.

C. J. EARL

GALEN ON PSYCHOLOGY, PSYCHOPATHOLOGY, AND FUNCTION AND DISEASES OF THE NERVOUS SYSTEM

In these days of rapid medical advancement, it is salutary to take a backward glance at the contribution made by medical pioneers of the past. The author in this volume evaluates Galen's views and work on neurophysiology and psychology. The present work represents the last volume in a trilogy dealing with Galen's system of physiology and medicine.

Although Galen lacked our contemporary expertise in the basic sciences, he was a careful anatomist and experimenter. The early chapters of this book discuss his views on neurophysiology. To some extent he was indebted to Hippocrates, Aristotle, and Plato but he developed more sophisticated concepts of homeostasis, aetiology, and teleology.

In his psychology, Galen was anxious to avoid a dichotomy between body and soul. He linked psychological types with physical constitution. While his approach to psychological treatment was rather didactic by present-day standards, it is clear that his management of emotional disturbances was a humanistic activity based on philosophic principles.

This is a fine academic work which will prove essential reading to anyone interested in the history of medicine or psychiatry. It is rather expensive even when allowance is made for current price rises. The reviewer, incidentally, noted 12 typographical errors.

A. BALFOUR SCLARE

CENTRAL NERVOUS SYSTEM. STUDIES ON METABOLIC REGULATION AND FUNCTION

Publication of the proceedings of large general symposia are rarely worthwhile, for such books tend to become disjointed collections of essays lacking in a connecting theme. This is true in the present book based on a symposium held nearly two years ago in Italy on metabolic regulation and function in the central nervous system. The editors have divided the 29 articles into three broad sections: one on metabolic pathways, a second on membrane function and neurotransmission, and a third on hormones and pharmacology. This has resulted in some inconsistencies, thus neuronal activity, axonal transport, and nerve terminal function appear under metabolism, whereas biochemistry of histamine is allocated to neurotransmission. No section is comprehensively covered. Metabolism of choline phosphoglyceride is interestingly discussed but not the functionally important polyphosphoinositides or the glycolipids and sterols. Intermediary metabolism, protein synthesis, development, drug dependence, behaviour, and memory are much too briefly dealt with. Despite these criticisms, the book has value in providing accounts of progress in research (particularly Italian) not readily available. Certain contributions stand out—for example, that on axonal transport of amine granules and nerve terminal function or another on application of micromethods to neurochemistry. Also of special interest is the review by McIlwain on adenosine in neurohumoral and regulatory roles in the brain.

Since emphasis is on the mechanisms of neurotransmission and drug interaction, this book is more suitable for the research-orientated neuropharmacologist than for the general reader.

A. N. DAVISON

ADVANCES IN NEUROSURGERY VOL. I. BRAIN EDEMA—PATHOPHYSIOLOGY AND THERAPY. CEREBELLO-PONTEINE ANGLE TUMOURS—DIAGNOSIS AND SURGERY

This soft-backed volume records the Proceedings of the German Neurosurgical Society at the 24th annual meeting held in Mainz in May 1973. The meeting coincided with the Otfried Foerster Centenary and many guest speakers participated, accounting for a third of the 65 papers presented. Attention was largely focused on the two topics in the title of the book. The first part, on brain oedema, comprises three sections dealing with pathophysiology, therapy, and intracranial pressure and blood-flow relationships. These 27 papers provide an up-to-date view of current trends in clinical and laboratory research in this important field. The section on the diagnosis and surgical treatment of cerebellopontine angle tumours is less successful because several of the better-known contributors have provided only short and un-