Book Reviews

PROGRESS IN BRAIN RESEARCH Vol. 25. The Cerebellum. Edited by C. A. Fox and R. S. Snider. (Pp. 355; 280 figures. £6 10*s*.) Elsevier: London/Amsterdam/New York: 1967.

During the past few decades a considerable amount of experimental research, both anatomical and physiological, has been done on the cerebellum in a number of laboratories in several countries. With increasing refinements in technique the more puzzling and difficult gaps in our knowledge of this part of the brain have been filled, and with the recent application of electron microscopy and microelectrode recording striking advances have been achieved. The present volume, the proceedings of a symposium held in Amsterdam in 1965, provides a comprehensive and up to date survey of present knowledge. Most of the ten contributions contain original observations but are also reviews of the respective subjects; there is an even balance between anatomy and physiology. Brodal, summarizing the work of the Oslo group, gives a most useful review of the extrinsic connexions of the cerebellum and incorporates recent work to clarify the organization of the efferent fibres in relation to function. The chapter by Fox and his associates on the primate cerebellar cortex is original and authoritative; it is undoubtedly the best account available. The difficult subjects of the physiology of the climbing fibres and of the inhibitory systems in the cerebellar cortex are discussed lucidly by Voorhoeve, the functional organization of the cerebellar influence upon the spinal cord is dealt with by Pompeiano, and Snider summarizes the evidence for cerebellar effects upon the sensory areas of the cerebral cortex. The price may appear high, but most chapters are profusely illustrated, both with line diagrams and half-tone reproductions. In a review of this volume, mention should also be made of another book which has recently been published, *The Cerebellum as a Neuronal Machine*, by Eccles, Ito, and Szentagothai, in which these authors synthesize the results of their anatomical and physiological research on the cerebellar cortex and efferent Purkinje fibres. The two books are, however, to a large extent complementary, and together they strongly support the claim that the cerebellum is now one of the best understood parts of the brain.

T. P. S. POWELL

PROGRESS IN BRAIN RESEARCH Vol. 27. Structure and Function of the Limbic System Edited by W. R. Bradley and T. Tokizane. (Pp. 489; illustrated. £8 10*s*.) Elsevier: London/Amsterdam/New York. 1967.

Those parts of the cerebral hemispheres which together form the limbic system—including the cortex of the hippocampus and cingular gyrus and their fibre connexions—have been the object of considerable attention ever since it was suggested that they are concerned in emotional expression. The more recent evidence indicating that the hippocampus may be part of the neural mechanism responsible for the elaboration of recent memory has provided a further stimulus for research. In the present volume appear the proceedings of an international symposium on the limbic system held in Japan in 1965. In the twenty or so studies reported here a wide variety of techniques have been used and many aspects of the limbic system have been considered—these include investigations on its possible participation in sleep mechanisms, reproductive functions, and learning, as well as pharmacological studies and detailed microelectrode recording of hippocampal cells. The contributions reflect the widespread interest in these regions of the brain, but they also demonstrate how little we really know about their functional significance. The volume is useful in providing a fairly representative account of ideas and work at the present time. Even after allowance is made for the large number of figures, the price seems high and will probably mean that the book will be obtained mainly for libraries.

T. P. S. POWELL

CEREBROVASCULAR DISORDERS By J. F. Toole and A. Patel. (Pp. xv + 280; illustrated.) McGraw Hill: New York. 1967.

The increased interest in cerebrovascular disease is reflected in the number of recent monographs devoted to this subject; the present volume will certainly have a respected place among these. Its strength lies in the excellent anatomical and physiological background it provides, much of it illustrated by first-class diagrams. This presentation makes it much easier to understand how cerebrovascular accidents, with their accompanying symptoms and signs, develop. The book scores further by the description of how clinical and ancillary methods should be used in order to elucidate the pathogenesis of a cerebrovascular incident. This section was obviously written with the general physician (who treats the majority of strokes) very much in mind. Stress is laid on what can be achieved by simple diagnostic methods, the more complex investigations available to special units receiving less attention.

It is therefore surprising that this rational yet practical attitude should evaporate to some extent when therapy is considered. The excellent diagnostic approach loses a little of its point when therapy seems to some extent to be a matter of rule-of-thumb.

It might for instance have been made more clear that the prime indication for anticoagulant therapy is embolism and the administration of anticoagulants to patients with transient ischaemic attacks is based on the assumption these are due to emboli—an assumption which may be justified only when all other causes have been rigorously excluded. This weakness, however, reflects to some extent the many uncertainties which still handicap the treatment of cerebrovascular disease; it does not detract from the

overall value of the book which will be of great help to all concerned with cerebrovascular disease.

EXERCISES IN NEUROLOGICAL DIAGNOSIS By J. H. Tyrer and J. M. Sutherland. (Pp. x + 262; 34 figures. 42*s*.) Livingstone: Edinburgh and London. 1967.

Medical students will find this book helpful, interesting, and entertaining to read. It is an account of eighty neurological cases taken from the authors' practice and covering a wide range of neurological disease. The histories and physical findings are clearly set out and not over long, and the discussions relevant and on orthodox lines. The book is arranged in chapters, with four cases described and discussed in each, but the discussion does not follow immediately on the clinical findings, to allow the student, as he is encouraged to do, to make up his own mind. The book naturally does not claim to be a neurological text but is an informative and stimulating piece of reading for the medical student on a neurological 'firm'. It should be pointed out that it is possible, clinically, to distinguish positional vertigo from brain-stem ischaemia (p. 69) if one is careful not to extend or rotate the neck in altering the position of the patient's head. This can be easily achieved by putting the head and shoulders over the end of the couch when carrying out the tests. The carotid arteriogram reproduced on p. 187 showing a 'blush' in the frontal region might have been better chosen, since it shows an apparently similar opacity over the parieto-occipital region; but this is presumably a matter of reproduction.

AN INTRODUCTION TO DIAGNOSTIC NEUROLOGY 2nd edition. By S. Renfrew. Vol. 1. (Pp. x + 194; 54 figures. 12*s*. 6*d*.) Vol. 2 (Pp. vii + 224; 69 figures. 12*s*. 6*d*.) E. & S. Livingstone: Edinburgh. 1967.

The first edition of this book was published in 1962. The author designed it in such a way that in three clinical terms the student is introduced in an orderly fashion to the methods of neurological diagnosis at the bedside. The three sections deal with motor signs, sensory signs, and cerebral signs. In this second edition he has added a short account of that important and neglected topic—the distinction between functional and organic signs.

Thus the plan of the book is unusual. But the originality does not stop there. The author has tried to show the student the nature of the mental processes used by a clinician—observational comparison, correlation, inference, and deduction. The logic of the diagnostician is admirably outlined; the meaning of 'empirical science' emerges. The experienced doctor appreciates such analyses; he nods in sympathy. It is to be hoped that the student does not find them too wearisome, just when he is at last allowed to approach the bedside. But if he follows the argument it will assist him not only in neurology, but in all his clinical studies.

Many of the author's comments also carry a note of originality and thought. There are some tart words of warning about teachers and clinicians. Dr. Renfrew also has courage. Few neurologists care to coin a new term; it is a practice very much frowned on by the Establishment. He has invented two new terms—'achoraesthesia' (a loss of space sense) and 'achorognosia' (spatial agnosia). But, to make up for it, the student is advised to drop the word 'epilepsy', as it has no meaning.

Stimulating teaching.

J. D. SPILLANE

MYCOSES OF THE CENTRAL NERVOUS SYSTEM By B. F. Fetter, G. K. Klintworth, and W. S. Hendry (Durham, North Carolina). (Pp. x + 214; illustrated. 102*s*.) Williams & Wilkins: Baltimore (E. & S. Livingstone: Edinburgh). 1967.

Several monographs have been written on the subject of mycotic infection: this one is specifically concerned with involvement of the central nervous system and it comes from a team of workers at Duke University.

It is a useful book for many reasons. It contains an analysis of the world's extensive literature as to the incidence of the disease, sources, and routes of involvement of the nervous system, clinical features, cerebrospinal fluid findings, course, and response to treatment. It is not surprising that the literature is vast, because, when a case is diagnosed and subsequently studied, those concerned usually feel that they have a duty to report anything so rare as a fungal infection of the nervous system, especially since almost any case can be claimed to be unique in some particular respect.

This book is also valuable for its fine range of illustrations, the advice offered on staining techniques, and its convenient classification of pathogenic fungi. There is, too, at the end of the book, a useful short table on the differential diagnosis of fungi according to their morphological appearances in tissues. The emphasis of the book is in fact on the identification of the organism in tissues (for instance the differential diagnosis of actinomyces from nocardia and streptomyces), so far as this is ever possible.

The number of fungal types that have been identified in lesions within the nervous system will surprise many readers, and in this volume perhaps for the first time they will be able to read about central nervous system involvement in paecilomycosis, allescheriosis, ustilagomycosis, penicilliosis, and many other rare infections. Those pathologists who have unidentified granulomas in their collections will here garner fresh ideas and wish once more that they had been afforded the opportunity of a culture. The importance of frozen sections in biopsy work is stressed, because if fungal elements are immediately recognized there is a better chance of securing their culture. The limited value of skin and serological tests is discussed.

Among the unexpected sources of infection mentioned in this book are blood transfusion, intravenous therapy lumbar punctures for the purpose of introducing bacterial antibiotics or anaesthetics, and—one which unhappily must now be more in our minds than formerly—the self-administration of drugs.

STROKE REHABILITATION: Basic Concepts and Research Trends. Edited by W. S. Fields and W. A. Spencer. (Pp. xii + 171; illustrated. $8.25.) Warren H. Green: St. Louis, Missouri. 1967.

The main title of this book is very misleading; the reader