BOOK REVIEWS

Parkinson's Disease: Anatomy, Pathology and Therapy (Advances in Neurology, Vol. 53). Edited by M B STREIFLER, A D KORCZYK, E MELAMED AND M B H YODIM. (Pp 596; Price: \$150.00). New York, Raven Press. 1990. ISBN 0 88167 634 9.

The flyleaf of this book would have us all believe that it is a timely review of current research in Parkinson's disease, when in fact it is yet another book based on papers presented at a Symposium. In this case it is a highly prestigious meeting, the Ninth International Symposium on Parkinson's Disease, held in Jerusalem in June 1988. These Symposia have happened every three years since the early days of Levodopa, and have marked the phenomenal success that is research into Parkinson's Disease. Each meeting has tended to have its trendy topic. The last time in New York it was Methyl Phenyl Tetra Hydropyridine [MPTP Parkinsonism]. This time the air was thick with rumours about foetal transplants for Parkinson's disease that had recently been performed. The MPTP story could now be assessed. The euphoria of the New York meeting had largely subsided, but MPTP had left its mark in two important ways—animal models for Parkinsonism and a putative role for endo- or exo- toxins. Similarly the place of neural implantation will have to await the next meeting in three years time. In this book there are only three papers on adrenal implants. Stanley Burns concludes that the "Madrazo procedure" appeared to produce improvements in some patients with PD. However, his opening remarks would seem a mite premature "... the start of a new era of tissue transplantation to the brain as a general approach to the treatment of Parkinson's disease."

Otherwise there is a wide variety of different topics discussed here. Lewy Body disease, corticobasal degeneration and new pharmacological approaches. The 500 papers presented here were presumably those from workers well enough organised to produce their manuscripts by the end of the meeting. Thus, there is little to get the book together, and one can only sample as takes one's interest. One tires of hearing that James Parkinson thought the senses uninjured and one would hope that the reader of such a tome would be well aware of the basic signs and symptoms of PD. Much of this repetition could be avoided if the main platform speakers, who produced review papers, led the discussion of each section of the book with a well directed and informed review. Subsequent papers could then be spared, going over the same ground and could concentrate on methodology, results and conclusions to their work. Can I suggest that format for advances in neurology volume 75, 1991? The early advances series used to recall the discussions after the papers. Presumably there now is too little space to do this. This often proved to be the most interesting part of the meeting, with novel ideas from the like of the late Andre Barbeau whose fervent imagination was much missed here.

This addition to the Advances in Neurology series is glossily produced as always but will have limited appeal except to libraries who need to complete the series. After all, it is already three years out of date, and everyone is planning their papers for the Tenth International Symposium in Japan 1991.

CG CLOUGH

Community integration following traumatic brain injury. Edited by JS KREUTZER AND P WEHMAN. (Pp 338; Price: £32.50). Sevenoaks, Edward Arnold. 1990. ISBN 0-340-537094.

Brain injury rehabilitation has advanced rapidly over the past decade, and the spotlight of interest has moved recently to the problems surrounding resettlement in the community. This is one of a number of books exploring the field, indeed several have appeared since this one was begun. Although the distinguished writer of the preface tells us that it "highlights the most current thinking", most of the authors are from a single centre (the Medical College of Virginia), and some details in the text are already contradicted by research published between the writing and the appearance. Such lags seem unavoidable.

The book has seven sections, covering Medical and Physical, Neuropsychological, Community, Vocational (i.e. work), Family, Paediatric and Public Policy aspects of rehabilitation. Overall it lacks a logical structure of relevance to "community integration". In the first two sections the connection is often artificial, and chapters throughout the book have repetitious preambles on epidemiology and the nature of the head injury. As so often, there are two drawbacks for British readers. First, the language is almost impenetrable at times: what does "Outcome Orientation and Functional Equivalencies" mean, for example? Second, in some important areas there is little correspondence between the American and British institutions. This is of course most obvious in the Vocational and Public Policy sections.

Many chapters provide forms for recording assessment and progress. Whilst these can be useful, they add to the plethora of existing instruments. Ironically, one group of authors criticises all previous family research, including Glasgow's, for "failure to employ well-validated or standardized measures", yet appends its own General Health and History Questionnaire, which "was developed to provide information similar to" that of the Glasgow instrument.

Nevertheless, several chapters offer valuable ideas and information, and should be helpful to those in this country who are trying to establish coherent organisation in head injury rehabilitation. Of particular value are those on Communicative Skills (sensibly concentrating on the neglected field of pragmatics), Memory Training in work settings, and the Rehabilitation of Children; the Practical Guide to Family Intervention is extremely useful. Sbordone's chapter on psychological treatment is an outstanding primer of assessment and understanding of the problems of head injury, but one wonders what it is doing in this book!

PETER EAMES

Head Injury - The Facts. A Guide for Families and Care-givers. By D GRONWALL, P WRIGHTSON AND P WADDELL. (Pp 147; Price £5.95.) Oxford University Press. 1990. ISBN 0-19-261922-5 paperback

This book can safely be recommended to patients or relatives. It is factual, does not lead to any serious false hopes, and is realistic enough to allow for (but not condone) the present inadequate level of resources devoted to the care of patients with head injury. It could also be read profitably by professionals unfamiliar with head injury when confronted by their first case. Indeed the text may almost be too academic for many lay readers in Britain.

The chapters cover most aspects, starting with the emergency medical and surgical treatment, and progressing on to long-term adjustment. Some typical cases are used to illustrate points. The statements made are all sensible and based on what evidence there is; the authors do not hesitate to admit that there is considerable uncertainty in almost all aspects of head injury management. The layout is good, with important points emphasised in boxes.

The authors have considerable research experience in the field and presumably have developed a service in New Zealand—in fact the last chapter outlines how services should be developed. Their bias is towards the effects of head injury on cognition and social interaction (ie changes in "personality" and behaviour), and the physical aspects are given comparatively little attention.

I only have one or two areas of disagreement. I feel this book may perpetuate the belief that "personality change" is a common if not inevitable consequence of head injury, whereas my own experience suggests that actual change is rare. It also seems to overemphasise the changes in social interaction; again my own experience suggest that most patients continue with normal behaviour. Headway literature also emphasises these problems, so much so that relatives anxiously wait for them to appear. Lastly the book does not discuss the problem of severe long-term disability.

This is a good book which fills a major gap in the literature available to patients. It should be available on each neurosurgical ward and trauma ward (possibly for sale, in order to make money for patient services in the new commercial NHS!).

DT WADE

New Ideas on the Structure of the Nervous System in Man and Vertebrates. By SANTIAGO RAMON Y CAJAL. (Pp 201; Price: £26.95.) London, The MIT Press. 1990. ISBN 0-262-03166-3.

Ramon y Cajal is remembered by Neuro-pathologists for the metallic impregnations he introduced, especially his gold chloride method for both types of astrocyte, which was simple, and always worked. But his fame in the last two decades of the 19th century rested on his remarkable achievements with metallic stains, chiefly his own modification of the Golgi method. With luck, this would stain a small number only of the nerve cells present, thus allowing them to be clearly followed over

long distances. At the time Cajal was embarking on his microanatomical studies the origins of motor fibres were known, but the central connections of centripetal fibres, and between neurons, were not. This small volume, first published in Spanish then French in 1894, and now pleasingly translated into modern English thanks to MIT, shows how he resolved many problems of this nature. As a short account of his work it is essentially an embryonic form of Cajal's later, monumental survey of vertebrate neurohistology published in French from 1909–11. The volume under review is beautifully produced, as befits a valuable, classical text. There are chapters on the spinal cord and brain, the olfactory mucosa, retina and internal ear, on the Golgi method and on the "spider cells". Convincing camera lucida drawings and diagrams are employed throughout, obtained from numerous vertebrate species, occasionally from man. Cajal's most important contribution was to show that nerve cells do make connections through dendritic plexuses, but without the cytoplasmic continuity believed in at that time. His work was widely known and admired; he shared the Nobel prize in Medicine in 1906, ironically enough, with his rival Golgi, for their views were nearly always diametrically opposed.

This is a book for the bedside, to be dipped into and kept, and never lent.

DGF HARRIMAN

Cerebrovascular Disorders—Fourth Edition. By JAMES F TOOLE. (Pp 553; Price: \$114.00.) 1990. New York, Raven Press. ISBN 0-88167-673-X.

The success of the previous editions justifies this new comprehensive review. We may envy the author's facility to write during a sponsored sabbatical year spent in the idyllic precincts of Green College, Oxford—no stranger to distinguished neurological literati.

James Toole has adopted the traditional approach with lavishly illustrated chapters on anatomy and applied physiology of the brain's circulation. He reviews the syndromes of the carotid and vertebro-basilar arteries, TIAs, their medical and surgical management; then, carotid stenosis, cerebral emboli, atherosclerosis and brain infarction. Succeeding chapters cover the rehabilitation, dementia, hypertensive syndromes, cerebral and subarachnoid haemorrhage and inflammatory and unusual vascular disorders, aneurysms and AVMs, anatomy and diseases of the venous system, and spinal vascular diseases.

The book spans 535 pages. Apt quotations head each chapter, deriving from authorities as protean as Osler, Conan Doyle and Mao Tsetung. Each section ends with selected references, set out under subject headings.

In such a comprehensive coverage it is inevitable that certain opinions are controversial. But, this is a healthy sign of a distinguished authority who has collected much of contemporary laboratory data and clinical trials and has not evaded the issues of proclaiming his opinions and advice: The risks of TIAs are said to be the risk of the underlying causes. The management of transient global amnesia is the management

of TIAs, and a trial of anticonvulsants is justified if EEG abnormalities are found and other measures fail. In cerebral embolism, if clinical examination indicates that the embolus is lodged in the extracranial circulation, ultrasonography is followed by angiography immediately preparatory to emergency surgery. In cerebral embolism, anticoagulants are to be given as rapidly as possible. In subarachnoid haemorrhage and the succeeding chapter on aneurysms, the incidence and clinical features of individual aneurysms are plainly portrayed, but the crucial problems of surgical morbidity and mortality of surgical management are given only in outline.

Many will agree with these views and with a variety of other debatable topics. It is refreshing to see so much data condensed and lucidly presented with clear diagrams and illustrations. Many sections, in a rapidly changing field of medicine, will soon be out of date; but the basic material about strokes will survive as a valued source of reference and of didactic opinion. I hope its purchasers will include general physicians as well as medical and surgical neuroscientists.

JMS PEARCE

Intervertebral Disk Diseases. 2nd Edition. Causes, Diagnosis, Treatment and Prophylaxis. By J KRAMER. (Pp 312; Price: DM148.00.) 1990. Stuttgart, Georg Thieme Verlag. ISBN 3-13-582402-0.

This book is a translation with revisions from the second revised German edition published in 1986. Perhaps as a consequence, the fairly extensive bibliography largely ceases around 1987 with occasional exceptions. The book is divided conventionally into historical aspects followed by anatomy and physiology then pathological anatomy and physiology, moving into discussion specifically of cervical, thoracic and lumbar syndromes. The discussion of the clinical aspects is relatively brief and not entirely uncontroversial. For example, the muscles of the thenar eminence are considered to be primarily involved in a C7 root syndrome. There is a failure to mention involvement of the adductors of the thigh in an L3 root disturbance, and misleadingly under the umbrella of lumbar syndromes attributable to degenerative changes of lumbar intervertebral discs, are included the symptoms of transverse myelitis (cauda equina syndrome). There is no entry in the index for arachnoiditis, that condition being discussed under the title of Post-discectomy syndrome. Curiously, on page 139 it is suggested that a disc herniation at L4/5 with L5 nerve root compression produces marked loss of active knee extension.

The discussion of the investigation of these various nerve root syndromes is also flawed. The discussion of EMG in the context of the differentiation of plexus from root syndromes is hardly touched on. Indeed the discussion of the EMG assessment in lumbar syndromes receives approximately a dozen lines. No mention is made of the value of paraspinal electromyography in the assessment of lumbar syndromes, nor detailed discussion of the role of peripheral conduction studies and evaluation of somatosensory responses. More serious still is the relative failure to discuss the role of magnetic resonance imaging in the

evaluation of cervical and, more particularly, lumbar disc syndrome. The brief section which appears on this technique around the middle of the book fails to do it justice, and indeed is restricted to references from before 1988.

There must be some further concern when assessing the sections on therapy. A vast range of therapeutic techniques is covered. At times statements are made without appropriate referencing. For example, "electromyographic studies have shown that the same relaxing effect on the lumbar muscles which is achieved with manual massage and (sic) can also be accomplished with electrical instrumentation". Many of these therapeutic regimes have been recommended without adequate objective data to analyse their true role. Rather more than half the references are in the German language.

In the light of these comments, therefore, I am unable to recommend this text book.

GD PERKIN

Central Regulation of Autonomic Functions. Edited by A D Loewy and K M Spyer. (Pp 390; Price: £65.00.) Oxford, Oxford University Press. 1990. ISBN 019-5051068.

This excellent review, edited by two distinguished neuroscientists, has drawn together the most modern concepts of central autonomic regulation and will be invaluable to other neuroscientists. In the past two decades there has been immensely productive research in this field which is summarised for the first time in this volume. The studies involved have used the newest techniques of neurobiology including a very recent method of tract tracing by retrograde transneuronal viral cell body labelling.

The book starts with the recognition that the preganglionic sympathetic neurones are not a homologous population in their localisation, somal shape and transmitters. This leads to the recognition of specialised coordinating functions even at the spinal cord level. At the brainstem level the nucleus tractus solitarius has major importance and the central network probably functions like a microprocessor to integrate a wide range of autonomic afferent information and then causes outward changes in the autonomic nervous system, the neuroendocrine system and possibly behavioural activities. There is a swing back to the conceptual model of Herring, who wrote in 1863 of "respiratory movements of the vascular system". The current model includes a cardiorespiratory oscillator that is common to both systems but that depends on two antagonistic reticular inputs.

For the clinician one aspect of particular interest is the autonomic responses that accompany epileptic motor seizures. As Hughlings Jackson postulated in 1869 there is now clear evidence of cortical representation in the insula, with a prefrontal autonomic premotor area and a prefrontal autonomic motor area. However, it is not easy to distinguish direct autonomic responses from reflex changes that accompany somatomotor activity, pain and generalised epileptic discharges.

Another area of interest to the clinician is the discussion of the "playing dead" reaction in the rabbit which may have analogies with