Book reviews

vations. The three experimental papers on oxygen metabolism and microcirculation in rats, the physiology of experimental brain infarction and the paper on nimodipine on cerebral blood flow are all of interest; they contain some new observations and the techniques are worthwhile pursuing further. The final section on rehabilitation is the least satisfactory and suffers most from the variability of the abstracts presented. There are no significant new techniques and advances in this group of papers.

If congress reports are to be regarded as definitive information to be subsequently used for reference purposes then a much stricter editorial policy is needed than is evident in this volume. However, if the object is simply to record the presentations for those attending the Congress then wider publication is clearly unnecessary. This volume falls between these two categories. A few papers are really worthwhile but most cannot be considered in the format in which they are presented. I would not recommend this volume for purchase at the price it is being offered, and in comparison with the previous series from the same Society it falls somewhat short of the high standards evident in previous Congresses.

I JACOBSON

Aging of the Brain and Alzheimer's Disease. (*Progress in Brain Research Vol 70.*) Edited by DF Swaab, E Fliers, M Mirmiran, WA Van Gool, F Van Haaren. (Pp 525; \$169.00.) Amsterdam: Elsevier Science Publishers, 1986.

This 70th volume of the *Progress in Brain Research* series contains the proceedings of the 14th International Summer School of Brain Research in Amsterdam in August 1986, and published over a year later. Since that time the research in this area has advanced considerably and particularly the molecular biology both of the putative familial Alzheimer's disease gene located to chromosome 21 and also the elucidation of amyloid. The precursor of the amyloid deposited both within blood vessels and the centre of the senile plaque in Alzheimer's disease has been elucidated, probes developed and the gene also located to chromosome 21. In the light of these important advances what can this book offer?

The main strength is that it presents a collection of reviews rather than simple research abstracts although there is clear variation in the general style. In general the

authors have followed the instructions of the editors to review their subject and to relate clinical features to experimental animal data. Despite the recent advances the problems covered remain central to the area of Alzheimer's disease and ageing. Chapters address the question of the role of the cholinergic abnormality and of aluminium both of which are still unresolved. Perhaps the most challenging of all is the relationship between so-called "normal ageing" in Alzheimer's disease and whether cerebral ageing should be considered as a normal biological or pathological phenomenon. In this regard there is a short review by Terry on the pathology of the ageing brain which is helpful and there is also an excellent review by Frackowiak on cerebral imaging and dementia. Also notable is the chapter by Professor Van Crevel on the clinical approach to dementia. This is the first chapter and provides an excellent introduction to the subsequent less clinical papers. The discussion of how treatable are the treatable dementias and how far one should investigate for what may be a very small return contrasts with the optimism of the scientific data. The clinical caution which is exercised in relation to cerebral biopsies will change if significant benefit can be demonstrated for the patients. Until that time this book remains a good source of overall review although it is unfortunately a very expensive introduction to the subject.

M ROSSOR

Advances in Headache Research. Current Problems in Neurology 4. Edited by F Clifford Rose. (Pp 280; £28.00) London: John Libbey & Co Ltd, 1987.

The growing interest in migraine is reflected in the presence of 500 symposiasts present at the biennial meeting and in the accompanying mini-symposia and satellite meetings of the International Headache Society and World Federation of Neurology Migraine and Headache Research Group. The organisation and prompt publication of the proceedings do credit to the experienced editor Frank Rose.

The publication spans 278 pages and 41 papers. It is divided into five sections. The first three deal with migraine pathogenesis, vascular aspects and therapeutics; the fourth concentrates on cluster headache and the fifth with other types of "idiopathic headache." The contents inevitably vary in approach and value, ranging from a simple

textbook type of survey of beta-blockers, through clinical trials of diclofenac, nasal dihydroergotamine to scientific studies of asymmetries of blood flow (Levine, Welch *et al*) and critical hypotheses of for example sensory connections of cephalic vessels (Moskowitz; Edvinsson *et al*). Platelet and basophil studies are described, peptides, dietary tyramine and wine are updated and fluid retention, menstrual and endocrine investigations are still unresolved enigmas.

Newer techniques of single photon emission tomography provide useful information non-invasively, and spectral analysis and topographic mapping (Schoenen, Jammaer and Delwaide) show interesting unilateral EES changes even in common migraine. It is pleasing to learn how much more data are accumulating, but its very diversity confirms the neurologist's traditional view of migraine as a disorder of function with protean expression and multifactorial aetiologies. Thus, a unified explanation, or a series of identifiable mechanisms leading to rational treatment still evade us.

This book is packed with useful data. It is warmly recommended as a vital source of references for the migraine research worker. The clinician too, will be able to familiarise himself with all that's new in the migraine world.

JMS PEARCE

Surgery of the Third Ventricle. Edited by Michael LJ Apuzzo. (Pp 872; £149.00.) London: Williams & Wilkins, 1987.

This is an excellent book and should be an essential requirement for any library of a neurosciences department, for although principally for surgeons in that there is a sizeable proportion of the book devoted to operative technique, there is information that would be invaluable to neurologists, neuropsychologists, neurophysiologists, neuro-radiologists and those involved with neurooncology.

From a surgical point of view the chapters on the operative approaches to the third ventricle and its surrounding anatomy are outstanding. The text, diagrams and photographs are all extremely clear and of good quality, and although there is inevitably some overlap, this is very much to the benefit of the reader. It is also of note that the difficulties and problems associated with the various approaches are given mention. Although the information in many of the

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chapters is to be found in individual papers in the neurosurgical literature, the way in which they have been brought together in this book is of great value, not only to the student neurosurgeon, but also to those already established in this field.

In addition to the excellent surgical/operative contribution, of particular interest are the historical and comparative anatomy chapters, and the chapters on adjuvant therapy of tumours. It will be a long time before this book becomes dated. The majority of the chapters are excellently referenced and the book is well indexed. It represents excellent value for money and I would anticipate that the problem that most neuroscience libraries would have is actually to keep it in their library.

AJW STEERS

Physiological Psychology: An Introduction. By Simon Green. (Pp 393; £10.95.) London: Routledge & Kegan Paul, 1987.

This is a book from the *Introductions to Modern Psychology* series. As stated by the author, the book was designed as a textbook of "manageable size" for psychology undergraduates. It aims to provide an introduction to the major topics in the field, and to cover some of the advances of the last two decades, while emphasising the psychological approach to the study of the relationship of brain function and behaviour. For this purpose, the book consists of 12 chapters which respectively cover the anatomical and functional organisation of the nervous system (two chapters), brain chemistry, sensory systems, hemispheric differences, memory and learning, habituation, central and peripheral mechanisms of emotion (two chapters), sleep and arousal, motivation, brain chemistry and psychopathology. A noticeable omission is a chapter on the spinal and brain mechanisms involved in the neuronal control of movement. The author notes that detailed presentation of motor processes are excluded as he considers this area to be of less psychological interest. Psychologists working on motor processes would of course disagree, and would argue that the topic is fundamental to the understanding of any form of overt behaviour. Furthermore, as major advances have been made in investigating and understanding the motor system during the last two decades (for example research on dopaminergic pathways in the basal ganglia) such a chapter

would have been in line with one of the stated aims of the book.

Throughout the book, the style of writing is clear and diagrams are simple, two major requirements if newcomers to the field are not to be put off by their first exposure to the complexities of brain function. The chapter on brain chemistry particularly stands out by being concise and informative. Overall, the book does fulfil its aims by presenting the majority of advances made during the last twenty years and by keeping the focus on the psychological approach to brain function. The brief but necessary reminder of ethical guidelines for animal experimentation is a welcome feature. At £10.95, the book might still be within the financial grasp of some undergraduates. Time will show whether Simon Green's (1987) *Physiological Psychology* will come to replace the somewhat larger size Tompson's (1967) *Foundations of Physiological Psychology* which has introduced several generations of psychologists to these complex topics.

MARJAN JAHANSHAH

Disorders of the Cervical Spine: Diagnosis and Medical Management. By John H Bland. (Pp 377; £40.00.) London: WB Saunders, 1987.

Professor John Bland has had a life long interest in the cervical spine. He is a rheumatologist and immunologist and this volume reflects not only his life long interest but also his medical approach to these disorders. The sub-title in fact describes well the contents of this book. The management is considered from the medical point of view and there is little in this book that the surgeon will find useful. For instance, out of 363 pages of text there is half a page on cervical radiculopathy and just under one page on cervical myelopathy. Professor Bland does not mention the surgical treatment of cervical radiculopathy amongst the seven treatments suggested and under the treatment of cervical myelopathy he considers that surgical therapy is indicated only in unusual circumstances. He feels that extensive laminectomy, foraminotomy and excision of osteophytes are not commonly successful.

Yet, on the other hand, this book is clearly a labour of love and Professor Bland's approach to the cervical spine is refreshing and unusual. I have enjoyed browsing through this book; there is much in it that I agree with but there is also a rather large component that I have to dis-

agree with. I don't think this book would appeal particularly to neurosurgeons or neurologists.

Lumbar Spine Surgery: Techniques and Complications. Edited by Arthur H White, Richard R Rothman and Charles D Rao. (Pp 587; £82.00.) Washington: The Mosby Company. UK Distrib: Blackwell Scientific Publications, 1987.

The aim of this book is to provide a broad perspective on lumbar spine surgery and it achieves this to a considerable degree. This is not a standard textbook and it does not offer any "right" way to practise spinal surgery. Instead, it shows the wide range of currently available techniques, ideas and experience so that each surgeon can choose intelligently those which will be most appropriate to his patients and his practice.

The editors successfully combine the widely diverging views of 41 sometimes highly individual authors. In order to avoid a didactic approach, many of the procedures are described by more than one author. This inevitably leads to some duplication but has the great merit of showing the range of surgical experience. Alternative procedures for the same problem are compared and contrasted. Throughout, there is a commendable attempt to present alternative and sometimes conflicting views. Particularly useful features are brief but critical comments by the senior editor and an illuminating survey of experienced spinal surgeons. Historical, basic science and biomechanical chapters complement the surgical chapters and again help to put surgery into perspective.

Inevitably, such an approach leads to some gaps. The emphasis is orthopaedic rather than neurosurgical and exclusively extradural. Indications, complications and results are well covered in general terms but there are not many hard data, particularly on results. The emphasis is naturally surgical rather than clinical and it is recognised that this may not always be appropriate for low back disorders. There are some views with which each reader will strongly disagree but others which support personal prejudices. With all its strengths and weaknesses this book offers a rich and stimulating perspective on lumbar spine surgery and can be recommended to every aspiring and established spinal surgeon.

GORDON W ADAMS