Acute Aneurysm Surgery. By K Sano, T Asano, A Tamura. (Pp 300; DM 220.) Vienna: Springer-Verlag, 1987.

Japanese neurosurgery in general and Sano's group in particular has made a formidable contribution to the development of acute aneurysm surgery and challenging the conventional wisdom about timing of operation. In a delightful preface, Professor Sano describes how the first Shogun probably died on 13 January 1199 of a rebleed following an initial subarachnoid haemorrhage on 31 December 1198, when he fell from his horse during the opening ceremony for a new bridge. Following a brief introductory chapter that places the various problems in context, there follows a most useful review of the pathophysiology of both immediate and delayed ischaemic neurological deficits. The authors are clearly wedded to the concept of proliferative vasculopathy as the basis for "cerebral vasospasm" and do not quote all the contradictory literature. Chapter 4 is an authoratitive review of the possible relevance of the metabolism of membrane lipids and eiconsanoids to cerebral vasospasm and ischaemic brain damage based both on the literature and Asano's very substantial personal contribution to this subject. Tamura reviews the problems of clinical grading of patients with some useful new data comparing aspects of the Glasgow coma scale with the Japanese scale. There now appears to be a consensus with publication soon of the World Federation of Neurosurgical Societies' clinical grading system. There is an interesting subsection on recurrent haemorrhage during angiography together with a detailed review of the prognostic value of CT scanning.

The authors recommend, from a review of over a thousand cases, that, if the patient presents within the first forty-eight hours after subarachnoid haemorrhage, microsurgical exclusion of the aneurysm with removal of subarachnoid blood clots is indicated for good grade patients but to be avoided in poor grades and in patients over 60 years of age. Post operatively, treatment with induced hypertension, volume expansion and a variety of cerebral protectors may be required. After 48 hours, their policy is to operate on good grade patients at any time, but to defer surgery in the poorer grades until they improve. Any deterioration leads to further postponement. They would recommend aggressive surgery for intracerebral haematomas with clipping of the aneurysm at the same sitting—such a policy resulted in a useful social life for forty-eight per cent of their cases.

Tamura provides a critical review of aspects of perioperative care and various drug trials. My only criticism of this chapter, which is common to almost all books on subarachnoid haemorrhage, is that there is no critical statistical analysis of how large such clinical trials have to be. There are too many trials of under a hundred patients in the literature when at least five hundred patients are usually required to determine whether a drug reduces the instances of delayed cerebral ischaemia for example. There is an exciting suggestion that a free radical scavenger may be useful but again a large double blind control trial is now necessary. Finally Sano reviews the microsurgical techniques required for various types of aneurysm and demonstrates that line drawings can be used with success to illustrate such surgery. The book concludes with over 650 references.

This book is one of the few sources in the literature which really gets to grips with the problem of delayed ischaemia after subarachnoid haemorrhage and does not simply regurgitate what has been written previously elsewhere. In 289 pages it is not a comprehensive account of all aspects of cerebral aneurysms and subarachnoid haemorrhage, but that was not the authors intention, and the book should be available in all neurosurgical departments.

JD PICKARD

Stroke and Microcirculation. Edited by J Cervos-Navarro, R Ferszt. (Pp 600; $146.50.) New York: Raven Press, 1987.

Over 200 contributors and 95 "chapters" suggest conference proceedings, but if this is the case, then there is no mention of either topic or venue in the introduction. Nearly all the chapters are written in the style of brief scientific papers (introduction, methods, results and discussion) and while most have something to do with the title of the book, many do not. There are, for instance, papers on bacterial infection, epilepsy, experimental hydrocephalus, tumours, immunology and head injury.

The chapters are grouped under six main headings: ischaemia, oedema, hydrocephalus, intracranial pressure and diffuse cerebrovascular disease. With the exception of the last group, almost all deal with animal work. They are of variable interest, depending on the particular bias of the reader. Poor continuity and annoying overlap are probably inevitable with so many chapters and this is a book to dip into with a specific inquiry rather than read as a whole. The references also suffer from some overlap but are generally comprehensive up to and including 1986.

The last section is the most clinically orientated. Entitled *Diffuse cerebrovascular disease* it includes papers on stroke and dementia. PET scanning is compared with other diagnostic imaging modalities in stroke and head injury, but these studies serve only to confirm that the most exciting machines no not necessarily generate the most exciting hypotheses. A paper on dementia claims that SDAT can be reliably differentiated from MID by MRI scanning but the study lacks credibility because no mention is made of mixed dementia (SDAT plus infarcts) which occurs with much greater frequency than pure MID.

This book will interest the experimental neuroscientist even if only as a source of reference. The clinician, however, will be disappointed by the lack of papers with either direct or potential applicability to man. There is no mention, for instance, of recent work on excitatory neurotransmitter antagonists in the context of cerebral protection against experimental ischaemia. Despite the book's title, none of the chapters deals with the pathophysiology of stroke in man and at $145.00, this is not a book for the departmental library.

J WADE

Occlusive Cerebrovascular Disease: Diagnosis and Surgical Management. By Thoralf M Sundt. (Pp 506; £80·00.) London: WB Saunders, 1987.

This book is written primarily for higher surgical trainees in neurosurgery and vascular surgery. It is largely a compilation of papers submitted to neurosurgical journals addressing a variety of neurovascular topics. There are several good chapters by invited co-authors, such as the chapter by JT Lye on the pathology of atherosclerosis, the chapters on radiology of cerebral ischaemia and the chapter on anaesthesia for vascular procedures by John D Michenfelder. A chapter on vein bypass graft patency is co-authored by the author's son, himself a trainee in vascular surgery. Although this book will be of only limited interest to the majority of neurosurgeons, it is a useful reference particularly for technical aspects of endarterectomy and bypass grafting, and neuro-anaesthesia for vascular procedures.

Only occlusive cerebrovascular disease is

addressed, and aneurysm, subarachnoid haemorrhage and arteriovenous malformations are not discussed except as they are relevent to bypass surgery. There is a hint towards the end of the book, however, that a second volume dealing with these aspects may be forthcoming. It provides an excellent account of carotid endarterectomy for the vascular surgeon, and this is one of its greatest strengths.

The book represents the accumulated wisdom and experience of Dr Sundt who draws upon enormous personal series of endarterectomy, proximal vascular reconstructions, bypass procedures and intracranial small vessel reconstructions. Indications, surgical techniques, analysis of results and controversies are presented for each procedure.

Although published in 1987, there is no reference to the results of the International Co-operative Trial on EC/IC Bypass Surgery. This is surprising as Dr Sundt has published criticisms of the Trial[1] and this book would have been enhanced by omitting much of the detail on the STA/MCA Bypass, and including an account of the International Trial, together with a chapter on the role and relevance of clinical trials in evaluating cerebrovascular disease and its treatment. Randomised clinical trials constitute the major yardstick by which medical and surgical therapy for cerebral ischaemia will be judged in the future, and the current multi-centre trial of carotid endarterectomy for symptomatic carotid artery stenosis will profoundly influence the standing of this operative procedure in the future.

The first section of the book dealing with cerebral metabolism is surprisingly scanty considering the excellent publications on cerebral ischaemia which have emanated from the Mayo Clinic. Autoregulation of the cerebral vasculature and the circumstances of its disturbance are only briefly covered, yet in subsequent parts of the book both Dr Michenfelder and Dr Sundt rightly emphasise the important role of monitoring cerebral blood flow and cerebral function during carotid surgery. There is relatively little on the rationale behind brain protection with barbiturates, although this is advocated.

Unfortunately, Dr Sundt does not fully address the issue of haemodynamic versus embolic causation of transient ischaemic attacks although he appears to favour a syngery of both mechanisms, implying that reduced blood flow predisposes to emboli. A chapter on rheological causes of transient ischaemic attacks and stroke would have enhanced the value of the book as a source of reference.[2]

The chapter on carotid body tumours is a valuable review for anyone who encounters this unusual tumour. The statement that embolisation has not been necessary in handling these lesions runs counter to the experience of many other authorities on this type of tumour and there is also inconsistency in the approach to radiotherapy. The statement is made that radiotherapy is of no value yet later in the chapter radiotherapy is said to be reserved for large tumours or cases unfit for surgery. This chapter would have been enhanced by including a review of the Mayo Clinic experience with other forms of paraganglionoma, namely glomus juglare tumours and glomus tympanicum tumours.

The chapter on CT and MRI of cerebral vascular disease is one of the strengths of the book. Acute angiographic studies, after acute cerebral infarction and high dose contrast enhanced CT scans are shown, however, without emphasis of the dangers of these procedures. Most British neuroradiologists would probably not advocate these measures acutely after major cerebral infarction, because of the effects of large doses of ionic contrast media.[3]

The book contains a good account of management of rarer forms of extracranial vascular disease such as fibromuscular dysplasia (for which dilatation or excision and grafting are advised) and extracranial carotid aneurysms and redundant loops, for which excision and end to end anastomosis are advised, and well described.

The chapters on brachiocephalic and aorto-carotid and aorto-vertebral stenoses and their reconstruction, and those on intracranial microvascular embolectomy, endarterectomy and angioplasty are fascinating accounts of what must be regarded as pioneering procedures. The Mayo Clinic series of these various procedures are large, and these chapters provide elegant testimony to the fact that there is almost no limit to surgical ingenuity. However, these are uncontrolled, selected series and these procedures need to be tested by multi-centre randomised trials of medical versus surgical therapy.

For the neurosurgeon who does not perform endarterectomy, the most interesting chapters are those outlining the use of vein bypass grafts for aneurysms of the anterior and posterior circulations, and on intracranial microvascular reconstruction and embolectomy.

MRR BULLOCK

References

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Motor Areas of the Cerebral Cortex. *CIBA Foundation Symposium 132.* (Pp 322; £28·95.) Chichester: John Wiley & Sons Ltd, 1987.

Specialists with particular research interests in the neurophysiology and neuropathology of the motor cortex and of movement control will find this Ciba Foundation Symposium a gold mine of up to date information and ideas. It comprises a series of papers given by different authors interspersed by free discussion. With Professor R Porter as chairman and the first paper by Professor CG Phillips, the Symposium has a start which builds very much upon the excellent monograph *Corticospinal neurones: their role in movement*, written by these authors some 10 years ago. Much of the experimental work carried out in the intervening period is referred to in the papers of the Symposium. The topics covered include the anatomy and physiology of afferent and efferent pathways to and from sensorimotor cortex, the functional organisation of the different motor areas, metabolic mapping of the cortex and two chapters on pathophysiology. If any criticism of content were made, it would be the lack of discussion of the development of the cortex and motor control and of the pharmacology of synaptic mechanisms, though it might be argued that these are sufficient in their own right as themes for symposia.

Although the papers are informative and present "state of the art" accounts, it is the discussion sessions, which, in the tradition of Ciba Symposia, provide the kind of illuminating and off the record comments that seldom reach journals. Examples include facilitation of corticospinal activity (following CG Phillips' paper), single neuron discharge in the motor cortex in relation to muscle activation (following E Fetz' paper), level and site of lesions in relation to impairment of motor function (following HJ Freund's paper) and loss of motor programming after lesions in the basal ganglia (following CD Marsden's paper).

This is a book for experts. It is rich in