**BRAIN TUMORS.** 1999. Edited by Harry S. Greenberg, William F. Chandler, Howard M. Sandler. Published by Oxford University Press. 350 pages. C$176.00 approx.

Brain tumors is a new monograph in the Contemporary Neurology Series written for "neurologists and other physicians who participate in the diagnosis and treatment of patients with brain tumours". The book is organized into 15 chapters the first seven of which are general chapters on the principles of brain tumour biology, imaging, surgery, radiotherapy and chemotherapy. The remaining eight chapters are disease specific, including overviews of the diagnosis and management of high grade gliomas, low grade astrocytoma, oligodendroglioma, posterior fossa tumours, CNS lymphoma, pituitary and pineal region tumours, extra axial tumours, and brain metastases. Each chapter has a uniform format including reviews of the history, epidemiology, basic biology and pathology, clinical presentation and differential diagnosis, common work up, and treatment including prognostic details. The usefulness of a uniform chapter format such as this allows as individual to pick up the book as a quick reference. However, in a cover to cover read, much is repeated and of less value to the seasoned clinician. For example, details of the neuro-imaging appearance of these tumours and the differential diagnosis tend to be repetitive from subtype to subtype of brain tumour.

Nevertheless, this is a very personal and useful book – the product of an experienced brain tumour dedicated multi-disciplinary team. It was somewhat disappointing that this text book is less than current. For example, in the chapter entitled "Brain Tumor Biology" there are 217 references of which two are from 1998 and there none from 1999. The preface for the book is dated July 1998 thus the book was likely completed with knowledge only up to including early or mid- 1998. In some chapters, recent information was obviously added into the already written manuscript. For example, the seminal discovery of genetic predictors of response and survival in oligodendroglial tumours by Cairncross et al published in 1998 was added into the chapter on brain tumour biology.

Chapter 4 on surgery for brain tumours consists of only three pages and is relatively weak. One can presume that the intention of the editors was to include disease specific surgical opinions scattered throughout the remaining chapters. In chapter 8, on malignant astrocytoma, discussion of the always controversial topic of cytoreductive surgery for malignant glioma is presented in a fashion that is based more upon personal experience than on evidence.

Discussion of supportive care issues of brain tumour patients are generally well-done, however, several statements are outdated. Concerning anticoagulation prophylaxis for the purposes of prevention of venous thrombo-embolism, the authors state that "anticoagulant prophylaxis must be considered before surgery and again in the post operative period". However, a recent randomized controlled trial was terminated prematurely when it was found that the initiation of preoperative low molecular Heparin resulted in excess bleeding risk to patients (Dickenson et al, Neurosurgery 1998; 43:1074-1080).

Chapter 6 concerning recent advances in radiotherapy for brain tumours lends support to the concept of interstitial brachytherapy for malignant gliomas. The discussion is somewhat imbalanced, most notably because of the exclusion of reference to the published randomized phase III trial of Laperriere et al in 1998. A similarly important randomized control trial was omitted from the chapter on Brain Metastases. Specifically, a good discussion a good discussion of the role of surgery for patients with single brain metastases, the important randomized controlled trial published by Mintz et al (Cancer 1996-78: 1470-1476) is omitted. This is surprising given that this study was published well before the editorial deadline for this book. However, the conclusions reached by the authors seemed to be concordant with common practice.

All in all, I think that this text book provides a good historical overview and broad perspective of the treatment of brain tumours in the last two decades of the 20th Century. It would make a useful reference in the library of clinicians treating patients with brain tumours. However, persons seeking the most up-to-date knowledge of the field would require this reference plus knowledge of the most recent literature.

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**ORGANELLE DISEASES, CLINICAL FEATURES, DIAGNOSIS, PATHOGENESIS AND MANAGEMENT.** 1997. Edited by Derek A. Applegarth, James E. Dimmick and Judith G. Hall. Published by Chapman and Hall. 450 pages. C$240.00 approx.

This copy was received for review in 2,000, three years after it's publication date, so that the most recent references are for 1996.

This book is from the British Columbia Children's Hospital group which has edited and also contributed substantially to the entire text. It covers the topic of organelle diseases – disorders of lysosomes, peroxisomes and mitochondria – in detail from the different aspects of basic science, pathology, clinical recognition and treatment and laboratory diagnosis.

The editors have assembled a distinguished team of contributors from the U.S., Britain, Australia and the Netherlands as well as Vancouver. In his preface, Derek Applegarth points out that the burden of organelle diseases together outnumber those of the small molecule disorders such as the aminoacidopathies, and together they have an incidence of about 40 per 100,000 live births if one includes phenylketonuria and galactosemia.

The section on lysosomal storage diseases contains a well-written chapter by Lorne Clarke on their clinical diagnosis and there are good contributions on both the laboratory diagnosis and also the microscopic anatomy of these conditions. The peroxisome disorders are superbly reviewed by Hugo Moser with his unmatched clinical experience of the adrenoleukodystrophies in the section on diagnosis and therapy and there are helpful sections on laboratory diagnosis and pathology. The mitochondrial disorders are well-covered both in the basic sciences as well as in their multiple syndromic aspects, mostly by the group from Newcastle and I found the clinical segment particularly good with helpful tables.

There is a final section on "Practical Disorders" which includes a description of available therapies by Lorne Clarke as well as more basic sections on how to construct a pedigree and on clinical examination. There are also helpful sections on specimen consent for DNA screening, a list of web sites as resources for medical scientists as well as families, and a very helpful glossary for the uninitiated or the temporally burdened.

The target audience for this book is not entirely clear: it is not a clinical pocket book to steer the clinician who is relatively unsophisticated in metabolic disorders and who seeks this type of guidance. This type of help is to be found in such smaller texts as "A clinical guide to inherited metabolic diseases", by Joe Clarke from

the Hospital for Sick Children in Toronto. It is not a direct competitor to the "bible" of metabolic disorders – the three volume edition "Molecular and Metabolic Bases of Inherited Disease", rather it appears to link the two, but in the more confined area of the organelles and their disorders. As such, it appears more likely that this will be both a reference text in libraries as well as finding a place in the bookshelves of the offices of some pediatric neurologists, pediatricians and neurologists with an interest in metabolic diseases.

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**Carotid Artery Surgery. First Edition.** 2000. Edited by Christopher M. Loftus and Timothy F. Kresowik. Published by Thieme, New York . 584 C$220.60 approx.

In 1953, Bill Lougheed, a neurosurgical research fellow from Toronto, and Hannibal Hamlin, an attending neurosurgeon at the Massachusetts General Hospital in Boston, performed a segmental internal carotid arterectomy and end-to-end anastomosis in a middle-aged woman with carotid stenosis who had suffered a stroke. The case report, however, did not appear in the Journal of Neurosurgery until 1958, which was four years after the same procedure was both performed and reported by Eastcott, Pickering and Rob (Rob, the vascular surgeon who actually did the operation) at St. Mary's Hospital in London, England. Eastcott et al's report therefore became the first ever reported surgical correction of carotid stenosis in 1954. Denton Cooley, an American cardiovascular surgeon, provided the first description in the literature of a true carotid endarterectomy (i.e. plaque removal through an arteriotomy), published in the Journal of Neurosurgery in 1956. It was either that same year or the year before that the first carotid endarterectomies were done in Toronto, these almost certainly also being the first in Canada (T.P. Morley, H.J.M. Barnett, and W.M. Lougheed, personal communications – they couldn't agree on the year).

The first three patients submitted for surgery in Toronto were those of Henry Barnett's, a young neurologist with a special interest in cerebrovascular disease, and following consultation with neurosurgeon Tom Morley they were turned over to several cardiovascular surgeons, Bill Bigelow, Donald Wilson and Jim Key, for repair. When Harry Botterell, the Chief of Neurosurgery at Toronto General Hospital at the time, returned from a trip and heard of these events he "raised the roof", reportedly, and along with Bill Bigelow, who was the Chief of Cardiovascular Surgery, saw a rule established at Toronto General Hospital that arteries above the level of the clavicle were the domain of neurosurgeons, and all those below would be looked after by the cardiovascular surgeons. Bill Lougheed, by then a junior staff neurosurgeon at Toronto General, performed the first large series of carotid endarterectomies in Canada, many of them again referred by his close colleague Henry Barnett, and those two men along with Robert Elgie described this early experience in the Canadian Medical Association Journal in 1966.

From these early beginnings, carotid endarterectomy has remained largely a neurosurgical procedure in Canada (unlike the US where over 90% of endarterectomies are done by vascular or general surgeons), and of course Bill Lougheed taught generations of neurosurgeons how to perform the beautiful operation he almost invented, for a condition he seemed so uncannily wise about. Many of his observations and teachings are just now being scientifically verified as the vast data banks from the randomized trials continue to be mined. For example, as I write this I note that the current issue of the journal Stroke (March, 2000) contains one article demonstrating that plaque irregularity (a "rough plaque") is associated with a higher risk of stroke even for moderate stenoses (i.e. unstable, embologenic plaques with unpredictable distal collateral flow to the hemisphere), while another paper indicates that near occlusion of the carotid, an urgent surgical indication for some, is in fact associated with a low risk (i.e. a smaller risk of embolism as well as the development of good distal collateral flow better able to compensate for complete occlusion). Two old Lougheed tenets.

There is indeed much being studied, restudied, written and rewritten about carotid disease and surgery these days, following what was roughly a decade of uncertainty preceeding and including the time of the large randomized trials, namely the European Carotid Surgery Trial (ECST), the North American Symptomatic Carotid Endarterectomy Trial (NASCET), and the Asymptomatic Carotid Artery Surgery Study (ACAS). These trials have verified the superiority of carotid endarterectomy over medical therapy in certain patients under certain conditions, and by all accounts the procedure is more popular now than it ever was. Its annual rate increased 2½ times in Ontario between 1989 and 1995 alone.

This lengthy and somewhat historical introduction to a review of Carotid Artery Surgery is meant mainly to point out the timeliness of its publication, but it is also prompted by the book's failure to include a page or two on the history and development of the procedure it examines in otherwise extraordinary detail. An odd omission given that this is one of the most comprehensive texts to date on the subject of carotid surgery, but editors Drs. Chris Loftus and Tim Kresowik might have felt it familiar and already well-covered territory.

There are more serious deficiencies, however, including the omission of a total of 17 pages of text and figures in the first section of the book copy I received, a problem I am sure will be corrected in future printings. This otherwise good section, entitled "Diagnosis, Imaging and Pathology", is an important one given the lively debate on what type of imaging is best in the investigation of carotid stenosis. The pitfalls of ultrasound, computed tomographic angiography or magnetic resonance imaging either alone or in combination are well-presented (at least in the pages I had left), and a good case is made for continued use of conventional cerebral angiography for all or most patients, at least for the time being. A discussion of plaque pathology will perhaps be broadened in the future by making analogy with coronary atherosclerosis and what is becoming known in the field about coronary plaque instability, rupture and symptoms (the heart scientists are constantly ahead of us).

Section Two on "Preoperative Evaluation of Carotid Disease" have several omissions as well, including in chapter eight entitled "Randomized Clinical Trials for Symptomatic Disease" a discussion of ECST and NASCET results pertaining to moderate stenosis, published in 1996 and 1998, respectively (of great importance and published well in advance of what would probably have been the submission deadline for this book). Asymptomatic carotid stenosis gets only three pages and is mainly a review of ACAS written by the ACAS principle investigator, and it predictably reaches the ACAS conclusion that asymptomatic stenosis 60% or greater is simply a proven indication for surgery. A larger and more balanced discussion of the relative indications for carotid endarterectomy for both