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

symptomatic and asymptomatic disease, taking into account not only the severity of stenosis but other factors including plaque morphology, contralateral disease, disease presentation and certain patient variables, and presented along with some clearly developed treatment guidelines, would have been useful. This section also contains chapters on medical therapy, cardiac disease and carotid surgery, internal carotid "tandem lesions" (which unfortunately does not include the recent NASCET publication on this subject by Kappelle et al), an excellent chapter on the visual system and carotid disease, and another on the timing of surgery following a recent stroke.

The next and longest section is on anaesthetic and surgical techniques, and it consists of 16 chapters covering every aspect of the procedure you could imagine. The technique of carotid endarterectomy is the topic of three separate chapters and irresistibly slipped into three others on different subjects, each author with their own preferences, but as the editors argue in the preface this kind of repetition is unavoidable in a multi-authored text and can even be considered valuable. This section is a resource for rarer problems affecting the carotid artery, such as nonatherosclerotic narrowing, tumors, and trauma.

The next section on "Perioperative Monitoring and Management" deals at length with the shunt controversy. There are succinct chapters on the different intraoperative monitoring modalities available, and ischemic, hemodynamic, cardiac and wound complications are covered. The management of postoperative stroke and neck hematoma is too briefly discussed given their relative importance. For example, the former is not divided into deficits upon awakening versus those that are delayed in onset, the two having clearly different implications with respect to etiology, investigation and management. The value of cranial CT as a first investigation for all deficits regardless of timing, as recommended, is questionable given that hemorrhage is a rare cause of postoperative stroke, and that valuable time may be lost in its performance. The management of neck hematoma receives less than a paragraph, despite it being a life threatening situation on occasion.

Sections five and six cover postoperative care and the future of carotid endarterectomy, and includes an up-to-date chapter on carotid angioplasty and stenting, the next challenge carotid endarterectomy must face. There is also a chapter on outcome analysis, a very important topic since the indications learned from the trials can only be applied to appropriately chosen patients when the local risk of the procedure is demonstrated to be acceptable, a delicate issue when one starts considering institutional audits.

This book, with both a neurosurgeon and vascular surgeon editor, has an authorship that is well-balanced between the two specialties. It is large and comprehensive, well-indexed, and the paper and figures are of good quality making its price justifiable (although make sure the missing pages are included in your edition!). It is a good reference for surgical libraries, but I suspect has too little to offer the already experienced carotid surgeon to justify inclusion in his or her own personal library. In the interest of time and savings, surgical trainees are probably better off consulting more condensed versions of the same information available in general, multi-topic neurosurgical texts, as well as numerous recent articles and monographs on the subject.

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EPILEPSY: PROBLEM SOLVING IN CLINICAL PRACTICE. 1999. Edited by Dieter Schmidt, Steven C. Schachter. Published by Martin Dunitz. 489 pages. C$141.85 approx.

The editors, Dr. Schmidt (Berlin) and Dr. Schachter (Boston) acknowledge that, in recent years there have been remarkable achievements in the understanding of clinical epilepsy and the introduction of new options for the treatment of seizures. These developments have been well-documented in recently published, comprehensive textbooks of epilepsy.

The purpose of this book, as stated, is to identify and help to resolve the many remaining and often complex clinical problems in the treatment of epilepsy for which there are no easy answers and which continue to puzzle clinicians and generate significant controversy in the literature and the lecture hall.

Multiple worldwide authorities have contributed to detailed and practical considerations pertaining to the management of a variety of clinical issues that continue to challenge neurologists and epileptologists.

The extensive text of 489 pages is divided into Diagnostic Issues and Therapeutic Challenges.

The Diagnostic Issues include discussions on the differential diagnosis of epilepsy; age-related diagnostic issues; the role of diagnostic tests in clinical epilepsy; identifying candidates for surgery, and diagnosis of associated behavioural disabilities. Within these categories are discussions related to seizures developing during sleep, seizures and syncopes, the diagnosis of non-epileptic seizures, the diagnosis and treatment of seizures in the elderly, the rational diagnosis of genetic epilepsies, psychiatric issues, and many other relevant topics.

The second half of the book, which is devoted to Therapeutic Challenges, includes discussions on the initiation, and termination of treatment; refractory epilepsies; childhood epilepsy; prognosis in epilepsy; and treatment of epilepsy. Within these topics are discussions related to starting and stopping anti-epileptic drugs, over-treatment of epilepsy, pregnancy and epilepsy, cognitive deficits in epilepsy, common treatment errors, ketogenic diet, long-term prognosis, predicting surgical outcome in epilepsy, and a team approach to treating epilepsy.

In essence, the primary benefit that is derived from this compendium is the logical and practical resolution that is provided for many of the common and often difficult problems encountered by neurologists, neurosurgeons, and psychiatric practitioners who are dealing with clinical problems related to epilepsy. The authors indicate that this book is not meant to be a complete textbook of epilepsy but, rather, a practical guide to many epilepsy-related problems based on extensive, authoritative clinical experience. In this role, it succeeds admirably. In addition, comprehensive references support the recommendations of the editors and contributors.

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TEACHING ATLAS OF BRAIN IMAGING. By Nancy J Fischbein, William P. Dillon, A. James Barkovich. Published by Thieme. C$180.60 approx.

This atlas is a compendium of 167 cases each representing a different disorder in which the intra-cranial contents are affected. In