

Books Received

FUNCTIONAL NEUROANATOMY. AN INTERACTIVE TEXT AND MANUAL. 2004. by Jeffrey T. Joseph, David L. Cardozo. Published by John Wiley & Sons. 575 pages. C\$90 approx.

HYPOTHERMIA AND CEREBRAL ISCHEMIA. MECHANISMS AND CLINICAL APPLICATIONS. 2003. Edited by Carolina M. Maier, Gary K. Steinberg, Published by The Humana Press. 188 pages. C\$132 approx.

KENNETH GEORGE MCKENZIE AND THE FOUNDING OF NEUROSURGERY IN CANADA. 2004. by Thomas P. Morley. Published by Fitzhenry & Whiteside. 208 pages. C\$40 approx.

MIGRAINE IN WOMEN. 2004. by Elizabeth Loder, Dawn Marcus. Published by BC Decker. 196 pages. C\$150 approx.

NEUROMUSCULAR JUNCTION DISORDERS. 2004. by Matthew N. Meriggioli, James F. Howard, Jr, C. Michel Harper. Published by Marcel Dekker. 300 pages. C\$231 approx.

NEUROSURGERY AND NEUROLOGICAL SCIENCE IN MANITOBA 1884 – 1984. 2003. by Rankin K. Hay. Published by self. 239 pages.

PAIN. PSYCHOLOGICAL PERSPECTIVES. 2004. Edited by Thomas Hadjistavropoulos, Kenneth D. Craig. Published by Lawrence Erlbaum Associates. 376 pages. C\$106 approx.

PRINCIPLES AND PRACTICE OF EMERGENCY NEUROLOGY. HANDBOOK FOR EMERGENCY PHYSICIANS. 2003. Edited by Sid M. Shah, Kevin M. Kelly. Published by Cambridge University Press. 438 pages. C\$75 approx.

SCALES AND SCORES IN NEUROLOGY. QUANTIFICATION OF NEUROLOGICAL DEFICITS IN RESEARCH AND PRACTICE. 2004. by Harald Masur. Published by Thieme. 464 pages. C\$75 approx.

TUBEROUS SCLEROSIS COMPLEX: FROM BASIC SCIENCE TO CLINICAL PHENOTYPES. 2003. Edited by Paolo Curatolo. Published by Cambridge University Press. 314 pages. C\$100 approx.

Book Reviews

MAGNETIC RESONANCE IMAGING IN STROKE. 2003. Edited by Stephen Davis, Marc Fisher, Steven Warach. Published by Cambridge University Press. 266 pages. C\$170 approx.

This is a comprehensive text covering current magnetic resonance imaging techniques in stroke. It sets out to cover in depth the various and still emerging applications of this technology in diagnosis and treatment of the common cerebrovascular diseases. The authorship is European and American and it is very well-written with the chapters flowing logically, and each being succinctly presented.

The obligatory introductory chapter on the importance of accurate diagnosis in cerebrovascular disease gives a good review of pathophysiology in stroke, and creates a solid foundation upon which the following chapters are set. A subsequent brief chapter outlines the various imaging modalities in stroke, highlighting the strengths and weaknesses of each. This is followed by two fairly detailed reviews of CT imaging in acute ischemia and in determining cerebral blood flow. The former by Dr Kummer effectively reminds us that CT still is an important modality in the initial workup of the stroke patient from a practical technical perspective as well as one of therapeutic impact.

The section on the technical aspects magnetic resonance spectroscopy and imaging is surprisingly understandable, even for the molecular physics-challenged such as myself. Written by radiologists, it is an important section to grasp in order to appreciate the technique applied to stroke.

The subsequent chapters deal with specific modalities of MRI in the common cerebrovascular diseases in a comprehensive but distilled fashion; this is all one needs to know to capably order and interpret reports of these studies. The explanations of perfusion and diffusion weighted imaging are clearly provided, as are the descriptions of various MR angiography techniques. Knowing the limitations, for

example, of MRI diagnosis of extracranial vertebral artery dissection is of immediate use to the clinician “in the trenches,” and this text sets these topics out in a very accessible manner. The final chapters provide an overview of the frontiers of this modality in drug development, applications of spectroscopy in stroke, and functional imaging.

In all, this text is a reasonably priced and valuable addition to the library of any clinician involved in the care of the cerebrovascular patient at probably any stage of his or her disease.

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NEUROLOGICAL AND NEUROSURGICAL CRITICAL CARE. 4TH ED. 2003. By Allan Ropper, Daryl Gress, Michael Diringer, Deborah Green, Stephan Mayer, Thomas Bleck. Published by Lippincott Williams & Wilkins. 403 pages. C\$163 approx.

When asked to review the fourth edition of Allan Ropper’s book on “Neurological and Neurosurgical Critical Care,” I paused a minute. Could I reliably review a book written and edited by my mentor and good friend and co-written by esteemed colleagues in the field? Many that I asked said “no.” I thought I could write homage to a book that was so influential in my thinking. “Neurological and Neurosurgical Critical Care” has been the book that made me get into intensive care neurology. It is required reading for anyone considering a career in intensive care neurology. It should be read and reread until it falls apart.

The first edition was co-edited by a neurosurgeon and an anesthesiologist, who each in subsequent edition dropped out, leaving Ropper the task for the third edition but are now replaced by five experienced neurointensivists, many from the first hour. The table of contents has not changed much, although the fourth edition slimmed

down and lost five chapters. This, however, is the result of tighter editing and combining material. It includes 9 chapters on general principles of Neurological Intensive Care with important emphasis on the link between the brain and other vital organs. The second part is entirely on specific problems in the Neurological Intensive Care Units and discusses the main disorders. The text has been rewritten, but large portions and tables have remained while appropriately acknowledging the original authors in the edited versions. This allows the book to undergo a transition from an edited book to an authored book improving coherence. As noted in the preface, "these changes allow an authoritative voice regarding the main themes." I believe this has always been the major strength of this book. The text is very readable, and the material is excellent. Personal views of the authors are mixed with hard solid data. Although "trialists" would disagree, I believe a personal view on many of the practical problems that are seen in the Intensive Care Unit is very useful for practitioners and fellows in neurointensive care. However, in several areas, the stated opinions are not more than one to two sentences (sometimes as an add-on in parenthesis) in areas that I would have a craving for a more comprehensive discussion. The book could be improved in the fifth edition. I do not know if it was a conscientious decision to be so plain, but I would have liked more illustrations and neuroimaging examples. A chapter on spinal cord injuries and fractures without any imaging is not easy to comprehend and less didactic. This also applies to the chapter on ischemic stroke that has no images or charts. Interpretation of CT scan and MRI scan in the acute neurologic setting remains part of the practice and certainly interpretation of changes that could explain deterioration. In other chapters, figures and tables have become clearly outdated and should be replaced. Some chapters would need some more work to get to the desired level. Nonetheless, the book content is comprehensive, tightly edited, error free, and is up to date. It is very easy to read and just a genuine pleasure to dive into. For me, it is a book that has a special place in my personal library and it should be for budding neurointensivists. There has been a flurry of neurological intensive care books over the last three years indicating healthy state of field and that is good. This book with its brevity and brilliance remains an indispensable text.

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EEG IN CHILDHOOD EPILEPSY. 2003. By Professor Hermann Doose. Published by John Libbey Eurotext. 414 pages. C\$150 approx.

This textbook on pediatric EEG adds a unique perspective with respect to the genetic influences on EEG and childhood seizure disorders. Professor Doose has amassed considerable expertise in this area by documenting EEG changes over time in his patients with epilepsy and by obtaining EEG studies on their family members.

In the initial chapters, the focus is on the normal EEG and its variants, including brief discussions on the genetic influences on normal EEG background. Chapter 3 outlines various epilepsy-related, genetic EEG traits, including 4-7 Hz theta in wakefulness, parieto-occipital 3-4 Hz rhythm, generalized spike and wave and photoparoxysmal response, the age when these are seen and their relationship to epilepsy. Clear illustrations of these traits are provided and the importance of the interaction of these genetically inherited "EEG risk factors" with various exogenous influences in the

pathogenesis of epilepsy is emphasized. While the Appendix summarizes findings in the EEG of healthy children, noting the frequency of specific "genetic" EEG findings at certain ages, this book does not provide a detailed description of the development of a normal EEG in children.

The latter chapters focus on EEG features seen in specific epileptic syndromes in infancy and childhood, again providing numerous examples of the evolution of EEG changes over time in each of these conditions. Although a genetic predisposition to seizures is well-accepted in specific syndromes including febrile seizures, the idiopathic generalized epilepsies and the benign partial epilepsies of childhood, the author notes a greater rate of genetically determined EEG signs of increased seizure liability even in children with a history of symptomatic neonatal seizures, underlying the importance of genetic susceptibility in all seizure types. Several practical and useful clinical "pearls" to differentiate commonly confused epileptic syndromes and EEG discharges are discussed. For example, the author notes several helpful features to differentiate benign from non-benign focal sharp waves, and Lennox-Gastaut from pseudo-Lennox syndrome or myoclonic astatic epilepsy. The chapters on the benign focal epilepsies of childhood emphasize Doose's work on "hereditary impairment of brain maturation" and the varied clinical picture seen with these EEG changes. The section on epileptic encephalopathies visibly indicates the variability and evolution of EEG changes over time in these conditions.

This book provides an adequate number of clear illustrations of EEG features to supplement the descriptions in the text. Although the language is, at times, a bit awkward, and the montages unusual (as many of the recordings were older), these factors do not detract appreciably from this book's readability. It will be an extremely useful addition to the library of any pediatric epileptologist.

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NEUROGENETICS: METHODS AND PROTOCOLS. METHODS IN MOLECULAR BIOLOGY. VOLUME 217. 2003. Edited by Nicholas T. Potter. Published by The Humana Press. 390 pages. C\$197.00

Neurogenetics is one of the newer volumes in the *Methods in Molecular Biology* series of books. This series focuses primarily on detailing specific protocols on a wide range of topics related to biology. This particular volumes' main thrust is to "highlight many of the contemporary methodological approaches utilized for the characterization of neurologically relevant gene mutations and their protein products". This volume covers a wide range of topics that are broadly divided into six sections: quantitative PCR, trinucleotide repeat detection, sequence-based mutation detection, molecular detection of imprinted genes, fluorescence in situ hybridization, and *in vitro* expression systems and studies of protein expression and function. There are 60 authors from around the world that contributed to the 32 separate chapters for this volume. Each has extensive experience with the particular protocol they are highlighting in their respective chapter.

Each chapter begins with a short discussion of the clinical disease that is being used as an example to highlight a particular protocol. The authors discuss the difficulties that have arisen in trying to explore the genetics of a specific disease and why they are using a specific technique. This is followed by some background knowledge about the