

two conditions, can be further blurred by the presence of both movement disorders and epilepsy in the same patient or the same family. A book that addresses these issues is a welcome addition to the literature on the subject.

This hard covered multi-authored book has been edited by a team of neurologists who have international reputations in movement disorders and epilepsy. This book is unique as it explores the overlap between these two conditions. It suggests that clinical observation may be insufficient to distinguish these conditions and that functional neuroimaging, neurophysiology, molecular biology and genetics must also be taken into account when determining if a patient has a movement disorder, epilepsy or both.

This book consists of 31 chapters each written by experts in the field. The book discusses the concept of channelopathies as a mechanism for the hereditary epilepsies and movement disorders and reviews animal models for these conditions. There are also chapters dedicated to motor cortex excitability as it is observed in epilepsy and movement disorders and the role of functional neuroimaging in the localization of epileptiform foci. There is a good discussion on the paroxysmal dyskinesias, the clinical similarities to epilepsy, syndromes with epilepsy and paroxysmal dyskinesia, animal models and the genetics of these conditions, as well as sections on myoclonic epilepsies, myoclonus, startle disease and pediatric movement disorders.

A drawback of the book is that the sections on genetics are already out of date. This is a problem with books which attempt to review the genetics of neurology. As the field of neurogenetics is moving forward so quickly any book on this topic would be outdated by the time it reaches publication.

This is an excellent book for any neurologist who is interested in the clinical, neurophysiological, molecular and genetic relationship between epilepsy and movement disorders. It is well-written and comprehensive and I am pleased to have it as part of my library.

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**A DISEASE ONCE SACRED – A HISTORY OF THE MEDICAL UNDERSTANDING OF EPILEPSY.** 2001. By Mervyn J. Eadie, Peter F. Bladin. Published by John Libbey & Company Limited. 248 pages. C\$61.45 approx.

This book presents an interesting history of our understanding of epilepsy. This comprehensive work is divided into: 1) phenomena included in the definitions of epilepsy, 2) the perceived pathophysiology and etiology of this disorder, and 3) how this understanding influenced its remedies.

Perceptive observations of epileptic phenomena appeared far earlier than any logically based concepts of pathophysiology. The authors describe a Babylonian medical text called *Sakikku* (All Diseases) published about 1050 BC. Its writers describe generalised tonic-clonic, Jacksonian and sensory seizures and may have compiled the first epileptic seizure classification. Such writings superseded the Hippocratic writings of about 400 BC. Subsequently, Galen's writings in the second century AD are thoroughly and succinctly covered but add relatively little to the *Sakikku*! Subsequently, Tissot in the 18th Century is apparently the first to have described absence seizures.

In the absence of confirmatory data such as EEG, many earlier

writings had an understandably narrow concept of epileptic phenomena. Such concepts broadened considerably by the 19th Century, particularly with the detailed descriptions by Herpin (1867). He recognised that the aura was not a prodrome but actually the beginning of the seizure and recognised three forms: peripheral, visceral and cephalic. Todd (1849) also described various olfactory, visual and auditory experiential phenomena.

Possibly the greatest single individual to advance our understanding of epilepsy was John Hughlings Jackson (1835-1911) who clarified pathogenesis, phenomenology, associated states, and the fact that epilepsy was a symptom as opposed to a disease. In contrast to some earlier authors, Jackson's concepts evolved over his lengthy career. Paradoxically, his interest in epilepsy stemmed principally from its insights into central nervous system function.

As stated above, progress in determining pathogenesis moved more slowly. A concept that epilepsy represented influence of supernatural forces was reluctantly abandoned. As expressed in Hippocratic writings (~ 400 BC), Greeks understood that unilateral motor seizures could represent contralateral cerebral hemisphere pathology. The very influential Galen (~ 130-210 AD) postulated that epilepsy was due to an obstruction of movement of "psychic pneuma" within the ventricular system whereas Hippocrates had cited a venous blockage as pathogenesis. Avicenna, an Arabian physician of the 10th Century, remaining within the ventricular concept, at least recognised that tonic seizures may originate in the region of the fourth ventricle.

Paracelsus, a 16th Century controversial figure advanced concepts significantly in hypothesising that epileptic seizures represented heightened brain activity as opposed to the Galenic blockage concept. Subsequently, Thomas Willis in *The Pathology of the Brain and Nervous Stock* (17th Century) demonstrated a welcome use of deductive logic in determining that epileptic seizures were a result of "explosions within the brain substance". Caton advanced our knowledge by demonstrating electrical activity of the rabbit brain in 1875, almost a century after Galvani first demonstrated electricity in the peripheral nervous system.

Subsequently, Jackson recognised that epileptiform activity did not arise from pathological tissue itself but in the normal cerebral cortical tissue surrounding it. (This profound observation is incompletely recognised even today.) On a background of studies by Fritsch and Hitzig (1870), Jackson realised that the several cortical functions were each localised in a different area of the cortex and that progressively evolving manifestations of an epileptic seizure represented ictal propagation. Perhaps equally profound was Gowers' postulate that each nerve cell was a storehouse of latent energy and that an epileptic seizure resulted from loss of an inhibition which normally prevents its inappropriate release (1881).

Logically based medical treatments for epileptic seizures followed descriptive and interpretive advances even more slowly. However, Galen recognised that appropriate diet and other lifestyle matters could measurably improve the course of epilepsy and this would be an early "quality of life" emphasis. A gradually increasing comprehension of epilepsy localisation ultimately lead to intracranial surgery, localising the intervention on the basis of ictal semiology as early as 1879 by William MacEwen in Glasgow, followed shortly by Victor Horsley in 1886.

The cortical localising studies in humans by Otfried Foerster could have been detailed more fully and his name spelled accurately. The enormous contribution of Hans Burger in establishing in

humans that EEG potentials arose from the brain and were not consequent to other electrical sources, could have been more fully described. These two scientists form the basis of pioneering studies by Penfield and Jasper in Montreal and therefore of modern neurosurgical therapy.

This work by Eadie and Bladin is more fully appreciated through a second reading. The authors considered it necessary to document the observations and theories of many writers leading to repetitiveness in some chapters. In places, the writing style could have been compressed without loss of message. Greater emphasis on the place of epilepsy concepts within scientific knowledge of the day would have provided a valuable perspective.

Nonetheless, this book is a careful compilation of much valuable material. The authors have succeeded in their intent. Clinical and basic neuroscientists with an interest in the historical evolution of epilepsy, observations and considerations will find this volume of distinct value.

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**MANUAL OF NEUROLOGY.** 2002 Seventh Edition.. By Maurice Victor, Allan H Ropper. Published by McGraw-Hill, Medical Publishing Edition, New York. 546 pages. C\$64.00 approx.

This “mini-book” is essentially a summary of the larger “Principles of Neurology” by the same authors. It is, however, not a brief summary and, at over 500 pages, is a respectable book in itself. The authors point out in the preface that, although this small volume is patterned after “Principles of Neurology”, one book is not a substitute for the other. In fact, they are meant to be companion volumes, with the small version satisfying the immediate practical needs of the student and resident, but the reader is indeed expected to turn to the larger volume for more information when time permits.

This small volume is a useful book, and essentially has the same table of contents as the larger parent version. This is a tried and true format and has benefited physicians for several decades. However, like all small books that attempt to cover a very larger subject area, this book has significant shortcomings. For example, in the section dealing with the use of TPA in ischemic stroke, it is not mentioned that all patients should have a prior brain CT scan, and that the presence of intracranial hemorrhage is an absolute contraindication to giving the medication. Likewise, in the section on “Hysterical Seizures”, no apparent major distinction is made between seizures resulting from a conversion reaction, and those resulting from malingering.

Some sections of the book seem out of date. For example in the prophylactic therapy of cluster headache, prednisone and lithium are emphasized, but there is no mention of verapamil. In the migraine section, the triptans are referred to along with ergotamine as “ergot preparations”. Oddly enough, cyproheptadine is referred to as a non-steroidal anti-inflammatory drug. The information on tension headaches is misleading, in that it seems to suggest that chronic tension-type headache is one of the most common headache types, and completely ignores the episodic form.

Nevertheless, this book is a compact and very useful source of neurological information. It is for the most part informative and relatively up-to-date. It is, however, difficult to see exactly for whom this book is intended. With chapters on the aging of the nervous

system, for example, it is obviously not meant to be simply a quick treatment reference for the medical student and house officer, and in any case its therapeutic sections are not well enough developed for that purpose. On the other hand, anyone wishing to understand the diseases of the nervous system, and the approach to therapy will need the larger “Principles of Neurology” parent volume.

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**CURRENT MANAGEMENT IN CHILD NEUROLOGY.** 2002 Second edition. Edited by Bernard L. Maria. Published by BC Decker Inc. 562 pages. C\$205.54 approx.

The second edition of Dr. Maria’s book presents a series of brief chapters on common topics in child neurology by a large group of highly respected authors.

The book is divided into three sections: 1) clinical practice trends, 2) the office visit and 3) the hospitalized child.

Section 1 consists of eight chapters with topics such as how to run a successful practice, how to do the neurological examination in children and useful internet sites. Much of the content in the initial chapters seems directed to the primary care pediatrician in the United States. The chapter on the neurologic examination, by Drs. Diadori and Carmant is excellent and the chapter on the internet and child neurology offers a useful array of websites.

Section 2 (The Office Visit) deals with the most commonly seen conditions in pediatric neurology. In this era of evidence-based medicine, I found the paucity of references unusual. References to authors and their work are frequent in the text but the source of the cited work is seldom provided. There are seven chapters of various aspects of headache. Although these are excellently written, common migraine associated phenomena, such as the “Alice in Wonderland” phenomenon, which frequently confuse pediatricians are not discussed. There are 13 seizure related chapters and five chapters which deal with various aspects of ADHD. Other “large ticket” items, such as developmental delay are dealt with in depth. The remainder of the section offers a series of three to four page overviews of various topics in child neurology. The authors often seem constrained by the space given them. For example, inborn errors of metabolism are dealt with in five pages.

Section 3 (the hospitalized child) deals with neonatal seizures and the treatment of status epilepticus in addition to such topics as raised intracranial pressure.

Overall this book is well-organized but is sometimes superficial and fails to deal with the less common pediatric neurology conditions. I was uniformly unable to find information on topics related to challenging patients in my clinic. The book is well-written and may be valuable to pediatricians but it will not suffice as a reference source for pediatric neurologists either in practice or in training.

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