

Book Reviews

BASIC MECHANISMS OF THE EPILEPSIES: MOLECULAR AND CELLULAR APPROACHES. Advances in Neurology Volume 44. Edited by Antonio V. Delgado-Escueta, Arthur A. Ward, Dixon M. Woodbury and Roger J. Porter. Published by Raven Press. 1096 pages. Cdn. \$137 approx.

This is one of a number of recent multi-authored books dealing with basic epilepsy research, but at 1096 pages, it is by far the most comprehensive. Concentrating on the cellular and molecular mechanisms involved in the cause and effect of seizures, the 53 chapters by 127 authors deal with topics in molecular biology, physiology, biochemistry, pharmacology, and pathology. In vitro electrophysiological recordings from hippocampal, neocortical, and other brain slices, direct studies of surgically resected human brain tissue, membrane patch clamp studies of single ion channels, the kindling model, recombinant DNA technology, and PET scanning are all major areas of research dealt with by this text which received little or no attention in the classic first *Basic Mechanisms of the Epilepsies* published in 1969 because they were either unheard of or were in the early stages of development. The book is not "an easy read" since most authors assume a fair degree of familiarity with their particular discipline on the part of the reader. Its main function will be as an up-to-date reference text for clinical and basic neuroscientists and their students who are interested in epilepsy research. However, the introductory chapter containing 357 references provides an overview of most of the work found in the rest of the book and also suggests priorities for research for the next decade. Anyone who wants a fairly detailed but concise review of current trends in epilepsy research can get it by reading this chapter. For those who will read no further than this book review, the "hot" areas in basic epilepsy research are: 1. electrophysiological recording in brain slices from both human and experimental models to determine mechanisms of neuron bursting and synchronization; 2. biochemical studies of epileptic human brains using PET and NMR technologies; 3. gene mapping in both the generalized and partial epilepsies; 4. studies of the consequences of seizures (i.e., do seizures lead to brain damage or further seizures?); and 5. utilization of basic biochemical and pharmacological findings to determine new anticonvulsant therapies.

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NEUROANATOMY, A CONCEPTUAL APPROACH. First edition. 1986. By C. Romero-Sierra. Published by Churchill Livingstone. 449 pages. Cdn. \$36.95.

I approached this text with interest and pleasurable anticipation. It is written by an author well known for his work in basic neurology and for his interest in medical education. The forward by Dr. John Basmajian praises the work in strong terms, and to me this was a recommendation that could not be ignored, given Dr. Basmajian's standing in the anatomical field.

Unfortunately, the book was a disappointment. The approach is a little unusual, although the idea of teaching concepts without a mass of detail is one that is very prevalent at the moment. It is said, that students will remember concepts better than

isolated facts, and that they will develop pegs on which to hang their clinical knowledge. Perhaps this is the case, but concepts are generalizations and should be based on proven fact. They will collapse when it is found that they don't account for all the facts and for the new facts that so rapidly accumulate, particularly in relation to the nervous system. An example of this is the concepts with respect to pain, the pain pathways, the functions of the thalamus and various aspects of pain sensory representation in the cerebral cortex which were current in the later 70's but which are now known to be incorrect and demonstrated as such by the discoveries of the 80's.

The first half of the book summarizes the main anatomical facts considered to be of importance by the author. Because of an apparent effort to economize, it contains a considerable amount of error or, more properly, half truth. Some of these are small but others are more fundamental. This is particularly so in relation to sensory representation in the cerebral cortex, the connexions of the thalamic nuclei and even with respect to the description of the gyri and sulci. The inputs and outputs of the various thalamic nuclei are given in general terms but the author tends to ignore the different subdivisions of these nuclei and presents each as a homogeneous mass. Such an approach does not do justice to the evidence available with respect, to take examples, to the projections of the cerebellum, the striatal complex and substantia nigra to the thalamus.

In the various sections presenting this overview of anatomy, there is simply not enough detail. I have personally found that, for concepts to be accepted, sufficient detail has to be presented to make the generalization obvious and explanatory of the facts given. It is true that in the latter part of the book more anatomical detail is presented but the scattering of information in this way is disturbing.

I was particularly disappointed by the chapter on the autonomic nervous system and then by the following one on the peripheral nervous system. This latter and many of the following chapters contain a considerable amount of elementary clinical material. This would be all very well, if it was explanatory of some aspects of the basic neurology but it does not read as such. Much seems to have been inserted more to satisfy the demand for clinical exposure.

The later chapters expand on the cranial nerves, the sensory motor systems and the regional structure and functions of the cerebral cortex.

The criticisms that I made of the early part of the book continue, but are diminished for this is the better part. There is to my mind an excess of simple clinical material and not enough basic neurology, but perhaps that is to taste. However, from this book alone, I would have found it very difficult to get a true picture of the reticular formation, the raphe system and various interrelationships of the striatal pallidal complex.

Most of the illustrations are good and they are particularly profuse, only a few are confusing and could be eliminated. However, this is a minor point. Having said all this, I must hasten to add that this is not a bad book. To the contrary, it is really quite good. The problem is, I feel, that I expected so

much more. With some judicious pruning of clinical morsels and the addition of a more coherent account of the basic neurology, it would be an excellent text, which, by its approach, would fill a neurological need.

It is difficult to say exactly where this book should fit in the market in its present form. I could not recommend it as the only text for a medical student. The book needs to be read in its entirety to get hold of all the information that is presented on almost any major sub component of the nervous system. It is not possible to use it for quick revision of a subject as is the case in the more classically ordered texts. It will certainly be useful for rereading of basic material by students in their clinical years and after graduation. The approach used should be attractive at this level.

The book is easy to handle and the production and printing are good.

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DIAGNOSTIC DECISIONS IN NEUROLOGY. First edition. By Klaus Poeck. Published by Springer-Verlag. 168 pages. Cdn. \$23.00 approx.

The purpose of this book as stated by the author is to provide assistance in diagnosis at the bedside. The organization of this book is symptom based, and each of its forty-one chapters deals with a specific symptom. Although an index is provided, the chapter names consist of a symptom complex, and the chapters are arranged alphabetically. Symptoms such as ptosis and dementia are easily found. Other symptoms pose a more difficult problem, as chapters with names like "Abnormal Posture of the Head" (Chapter 1) or "Progressive Wasting of Hand Muscles" (Chapter 27) are also listed alphabetically. However, the reader can rapidly skim the forty-one chapter titles, and determine which best fits his patient's symptom.

Each chapter starts off with a list of diagnoses. After a short general introduction, each diagnosis is then briefly dealt with in a paragraph or two. For example, chapter 7 (Acute Unilateral Seventh Nerve Palsy) starts off with a list of ten diagnoses ranging from "idiopathic" to "Melkersson-Rosenthal Syndrome" and each is briefly dealt with. This organization of the book is potentially very useful, and indeed makes it a practical bedside resource. Some chapters, such as the one on vertigo, appear very helpful. Others, however, are somewhat artificial. For example, meningitis is dealt with primarily in the chapter "Impairment in Anteflexion of the Head". The chapter on headache does not mention meningitis.

The book is at times incomplete. The chapter entitled "Abnormal Posture of the Head" does not mention idiopathic torticollis or dystonia. Neither is torticollis listed in the index. Occasionally, information given in this book is somewhat misleading, as for example, the statement that 30% of patients with amaurosis fugax will suffer cerebral infarction within one year. Finally, the book at times suffers from poor English, as for example when the sural nerve is said to be "patent" on nerve biopsy.

The organization of this book is interesting and potentially useful in ensuring that possible diagnoses are not overlooked by the clinician. It would benefit, however, from some restructuring, particularly with regard to terminology used for the symptom complexes used for chapter titles. A more balanced

approach would also benefit subsequent editions. For example, in the chapter "First Epileptic Seizure in Adulthood", eleven causes are listed, but nowhere is it mentioned that even in adults presenting with their first seizure, no definite cause will be found in most patients. One of the strengths of this book is the emphasis placed on clinical diagnosis. Extensive radiological investigations are, where appropriate, discouraged as unnecessary.

In summary, this book is potentially useful primarily for medical students, interns and residents. It does have significant weaknesses as discussed above, and hopefully these will be dealt with in future editions.

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TICS AND RELATED DISORDERS. By A.J. Lees. Published by Churchill-Livingstone (Academic Press Canada). 276 pages. Cdn. \$72.00 approx.

The title of this book is slightly cryptic. The 'related disorders' include hyperekplexia, hyperactivity syndrome, schizophrenic stereotypes, focal dystonia, tardive dyskinesia, acute dyskinesia, chorea, levodopa induced dyskinesia, myoclonus. From this breadth of scope, an alternative title might have been 'Movement disorders other than Parkinsonism'.

The main value of this book is that unlike the numerous publications on a similar range of disorders, this is written by one neurologist, and represents his personal view and experience of these diseases. It is therefore much more readable than its multi-author counterparts. There are many erudite clinical morsels, such as reference to 'le gros ventre', 'Pisa syndrome', 'Latah' and 'Miryachit'.

The strength of this book is also, perhaps, its weakness, for by being a personal account it seems to represent the author's particular approach to various aspects of diagnosis and management. For example, in the treatment of Gilles de la Tourette Syndrome, surely an important section of this book, there is no mention of tetrabenazine. Indeed tetrabenazine does not even appear in the index, yet the evidence for its efficacy is published and in the opinion of this reviewer, it is the drug of choice for treating Gilles de la Tourette Syndrome.

In summary, this is a good book for anyone interested in movement disorders. It has the unusual quality of being enjoyable to read, and in view of its concise length, it makes an excellent companion for a long flight or a weekend of relaxation.

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PEDIATRIC NEUROLOGY. First edition. Edited by Marvin A. Fishman. Published by Grune & Stratton, Inc., Harcourt Brace Jovanovich. 355 pages. Cdn. \$72.00 approx.

At the present time there are several standard text books of pediatric neurology available. All treat the subject matter fairly extensively, sometimes exhaustively, and are clearly aimed primarily at neurologists and neurologic trainees. This book, a multi-author effort edited by Dr. Marvin Fishman, is intended primarily for pediatricians, family physicians and other health care practitioners who may come in contact with neurologically compromised children. The authors have made no attempt to generate an exhaustive compendium of pediatric neurological information but have produced a book of modest proportions