

Book Reviews

CLINICAL NEUROLOGY. Edited by Alexandre B. Todorov. Published by Thieme-Stratton, Inc., New York. 358 pages. \$31.18 Cdn.

This book is intended to be a resident's guide. Written at a relatively elementary level, this relatively short multi-author book emphasizes practical patient management and therapy while at the same time supplying a reasonable amount of pathophysiological background material.

The organization of this book is somewhat unusual. There are conventional chapters on cerebrovascular diseases and central nervous system infections, but these are interspersed with some unusual chapters on the neurology of pregnancy, child neurology, and even a composite chapter entitled "Entrapment Neuropathies, Low Back Pain and Neck Pain". However, the table of contents is clear and most material can be easily found. The book does not have an index, and this is a liability.

At times, the book is too brief. For example, the dose of phenytoin for status epilepticus is given as "for the average adult, 1000 mg". For such a critical situation, a recommended dose in mg/kg body weight would be more precise and not leave the resident guessing.

Also, under the therapy of status epilepticus, the statement is made that parenteral phenobarbital is "half as strong milligram per milligram as the oral dose". The basis for this statement is not clear to me.

The book does contain a few contradictions. For example, it is stated, I believe correctly, that "primary muscle disease generally is . . . unassociated with . . . reflex abnormalities" yet in a pretest question, in answer to the question as to what anterior horn cell diseases and myopathies have in common, the correct answer is said to be "weak or absent reflexes".

The book contains extensive self-assessment tests which in fact constitute 138 of its 358 pages. These are an interesting feature of the book, and references are given for many of the questions. These self-assessment tests should assist the reader in deciding if mastery of the material in the text has been achieved.

In summary, this book offers a short but reasonably balanced practical approach to clinical neurology coupled with extensive self-assessment tests. The various chapters of this multi-author text are of uneven quality. Although not a definitive textbook of neurology, residents and other junior house staff may find it useful.

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LOCALIZATION IN NEUROPSYCHOLOGY. First Edition. Edited by Andrew Kertesz. Published by Academic Press. 527 pages. \$66.25 Cdn.

In the words of its editor, the authors of this volume "rise to meet the challenge of integrating function with structure . . . in the central nervous system". A difficult task indeed, and one

which researchers have in truth only begun. This interesting book reviews some of the more recent additions to our knowledge, and in so doing provides encouragement that progress indeed has been made, and offers optimism that the future will hold much more.

The initial chapter by Kertesz provides an able discussion of some theoretical issues which must be faced in research in localization, and a number of warnings which are reinforced in reading the remaining chapters. The next five chapters review five methods for studying human brain function: anatomical analysis, CT scan, positron emission tomography, regional cerebral blood flow, and electrical stimulation of the exposed cortex during surgery. The chapter on anatomical analysis by Galaburda and Mesulam provides detailed instructions on the procedures to be followed for a variety of analyses. The other four chapters review not only techniques but some of the results of their application.

The majority of the book is devoted to examining the relationship between various behavioural deficits and, the localization of the lesions associated with them. Many of the chapters, including some of the most convincing ones, deal with deficits in language functions. Taken together, they present a picture of relatively discrete cortical zones subserving language functions which, considering the several authors, is surprisingly consistent. Other chapters deal with a variety of additional topics, including an interesting presentation of the localization of apraxia-producing lesions by Heilman, Rothi, and Kertesz and a forceful presentation on the Gertsman syndrome and its relationship to left-parietal lesions by Strub and Geschwind.

The final chapter is an overview by Kertesz in which he comments on the other chapters. Despite his diplomacy as editor of the book, his comments are critical and useful to the reader unfamiliar with particular areas.

As with any multi-authored book, some of the chapters are weaker than others. In particular, the chapter on the frontal lobes by Stuss and Benson provides little insight into structural/functional relations within the frontal lobes. This is in no small part because of their decision to compare epileptic patients with unilateral frontal lobectomies to schizophrenic patients with bilateral frontal leucotomies.

I enjoyed reading this book, and would recommend it to clinicians or theoreticians with an interest in relations between function and structure in the brain. It is not an introductory book, but rather is intended for those with some prior knowledge or neuropsychology.

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NEUROLOGIA INFANTIL. By Ignacio Pascual-Castroviejo, M.D. Editorial Científico-Médica, Barcelona, Spain. 2 vols. 1612 pages. Price apx. Cdn. \$100 (copies may be ordered directly from author: Orense 14, 10°E, Madrid, 20, Spain)

This comprehensive two-volume textbook of pediatric neurology is the first such work in the Spanish language, written

by an eminent Spanish child neurologist who has made many original past contributions to the world literature. The tomes are attractively produced using good quality paper and are profusely illustrated with 1,235 pictures, about 30 of which are in colour. Many original line drawings clarify difficult anatomic concepts. The author's expertise and interest in radiology, he having formerly published another text on pediatric neuroradiology, are evident in the many carefully selected radiographs. Patient photographs and EEG tracings also are generally quite illustrative. My only disappointment in the illustrations is that I would have preferred to see more histopathology. The text is well written and clear.

An encyclopedic treatise on as broad a subject as pediatric neurology necessitates that some disorders be discussed only briefly in one or two paragraphs, but the author compensates in most cases with extensive and up-to-date references for further reading. These citations, together with the carefully compiled indices, make the textbook exceptionally useful as a reference source. The author's experience with dysmorphic syndromes, cerebral malformations and problems of embryologic development make these sections particularly interesting and informative. The most recent revision of the international classification of the epilepsies is used. Sections on metabolic diseases and neuromuscular disorders are clinically oriented but current and inclusive.

While comparisons with the 2-volume textbook of Swaiman and Wright are inevitable, Pascual-Castroviejo has written quite a different book. It is gratifying to see the country that provided such exceptional early pioneers as Ramón y Cajal and de Río Hortega continue to make contributions in the neurosciences. I would highly recommend this textbook to any pediatrician or neurologist who reads Spanish, and look forward to possible future translations to French and English.

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BASIC MECHANISMS OF NEURONAL HYPEREXCITABILITY (Neurology and Neurobiology, Volume 2). Edited by Herbert H. Jasper and Nico M. van Gelder. Published by Alan R. Liss, Inc., New York. 495 pages. \$120.00.

Is epilepsy a result of decreased inhibition, increased excitation or an intrinsic membrane abnormality of neurons? Do dendrites move? Is there electrical transmission between neurons in the C.N.S.? Do glia regulate neuronal function? How does North American scorpion venom work and why is this relevant to neuron activity? What produces a P.D.S. (paroxysmal depolarization shift), the neuronal hallmark of the EEG spike?

What is a neuromodulator? How do phenobarbital and phenytoin work? What is Florey's Factor I?

If any of these questions interest you, you will find the answers (or at least the authors' biases) in this volume. Based on a symposium at Université de Montréal in 1982, the book, whose multi-authored chapters range from good to excellent, examines (according to the dust jacket) how changes in neuronal excitability are of "major significance" in the epilepsies as well as in "the development of mental and motor disorders". Those interested in epilepsy will find a wealth of relevant basic scientific information. However, only occasional and indirect reference is made to how the data presented relates to psychiatric illness or motor system disease.

About equal parts of physiology and biochemistry are mixed with smaller amounts of anatomy, endocrinology and pharmacology to produce a balanced overview of neuronal hyperexcitability as seen from a basic neuroscientist's viewpoint. Control of membrane excitability is discussed with respect to four main areas: cellular microcircuitry (cell interaction), ionic mechanisms (extracellular and intracellular ion concentrations, membrane ion channels), neurotransmitters (including neuromodulators) and energy metabolism. Particularly noteworthy to anyone interested in the basic mechanisms of epilepsy and its treatment are the chapters by David Prince on ionic mechanisms in epileptogenesis and Robert Macdonald on the mechanisms of action of barbituates and hydantoins. Discussions recorded after the presentations at the Montreal meeting follow each chapter and these contain some of the most thought-provoking ideas in the book, a significant share provided by the senior editor, Dr. Jasper.

Dr. K.A.C. Elliott of Montreal, to whom this book is dedicated, was the first to determine that Florey's Factor I, an inhibitory substance in mammalian brain, was GABA.

The text is well edited with only the occasional spelling mistake, (e.g. protoxinin for picrotoxin, page 368). An annoyance is the use of two different qualities of paper throughout the volume, particularly when one considers the price.

Although there has been a proliferation of books from symposia of which several on epilepsy research have recently been or are about to be published, I would still recommend this volume to any clinical or basic neuroscientist who has an interest in epilepsy or who wishes to understand a little better how the brain works. However, unless you are independently wealthy or have a large expense account, you might want to ask your local library to purchase the book.

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Books Received

ASSESSMENT OF APHASIA AND RELATED DISORDERS, 2nd Edition. By Edith Kaplan and Harold Goodglass. Published by Lea & Febiger, Philadelphia. 102 pages. \$34.50 Cdn.

EXPERIMENTAL AND CLINICAL INTERVENTIONS IN AGING, 1983. Edited by Richard F. Walker and Ralph L. Cooper. Published by Marcell Dekker Inc. 448 pages. \$81.25 Cdn.

FUNDAMENTALS OF NEUROPSYCHOPHARMACOLOGY, 1984. By Robert S. Feldman and Linda F. Quenzer. Published by Sinauer Associates Inc., Massachusetts. 508 pages. \$43.75 Cdn.

GLUTAMINE, GLUTAMATE AND GABA IN THE CENTRAL NERVOUS SYSTEM, 1983, Series: Neurology and Neurobiology. Edited by Leif Hertz, Elling Kvamme, Edith