

Book Reviews

NEUROLOGICAL MANIFESTATIONS OF SYSTEMIC DISEASES IN CHILDREN. 1993. Edited by Avraham Steinberg and Yitzchak Frank. Published by Raven Press. 399 pages. \$114 Cdn. approx.

This volume is the latest in The International Review of Child Neurology series. The editors indicate that their goal is to complement textbooks in pediatrics and pediatric neurology. The arrangement of the book is similar to that of standard pediatric textbooks and is divided into 8 chapters, each of about 40 pages.

The first chapter provides an overview of the neurological manifestations of malnutrition. The chapter is well laid out and the references are divided into easily used sections on general malnutrition, vitamins and trace elements. The subsequent chapters deal with rheumatic and infectious diseases, and the gastrointestinal, hepatobiliary, renal, cardiac and endocrine systems.

While each chapter is quite comprehensive, most sections are brief. The style is clear and consistent throughout the book and the presentation allows it to be easily read. The organization is designed for easy use, for example the chapter of gastrointestinal diseases is divided into sections on malabsorption syndromes, enteric infections, chronic inflammatory bowel diseases, anatomic disorders and "miscellaneous". Many topics are presented with subheadings of pathophysiology, neuropathology, clinical picture, laboratory tests and treatment. Each chapter contains a number of useful tables containing differential diagnoses and syndromes with their major systemic and neurological manifestations.

While not a complete resource for neurological complications of systemic disease in children, the editors are successful in their goal of producing a book which summarizes current information on this topic and which will complement textbooks in pediatrics. The organization of the book allows it to be used as a useful reference source for both pediatricians and pediatric neurologists. It deserves to be part of the office library of all those who treat children.

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INTERVENTIONAL NEURORADIOLOGY: ENDOVASCULAR THERAPY OF THE CENTRAL NERVOUS SYSTEM. Edited by Fernando Vinuela, Van V. Halbach and Jacques E. Dion. Published by Raven Press. \$114 Cdn. approx.

Drs. Vinuela, Halbach, and Dion have drawn from their experience and the contributing authors to create an introductory textbook in Interventional Neuroradiology, describing current concepts and techniques. This textbook reads easily and the illustrations are good. The introductory chapter unfortunately refers to outdated classifications of vascular malformations and neoplasms. The current status of embolic materials, as far as regulatory agencies in North America are concerned, is also not mentioned. The chapter dealing with endovascular treatment of dural vascular malformations is comprehensive and of high quality, as are the chapters on vein of Galen malformation, stroke and chemotherapy. The chapter on brain vascular malformations is limited in scope, lacks detail and does not contain adequate literature review. The two chapters dealing with endovascular treatment of intracranial aneurysms reflect the transition phase of aneurysm treatment at that time with different

approaches succeeding each other. It could have been dealt with in one single chapter.

With few exceptions, most chapters are lacking sufficient detail to assist interventional neuroradiologists in their current practice. The text appears to be more geared towards those physicians who would like to be informed and updated on interventional techniques currently available. As such, the text fills a need and is recommended for neurologists, neurosurgeons and neuroradiologists not actively participating in interventional neuroradiological techniques.

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EPILEPTOGENIC AND EXCITOTOXIC MECHANISMS: CURRENT PROBLEMS IN EPILEPSY. VOLUME 8. 1993. Edited by Avanzini, Fariello, Heinemann, Mutani. Published by John Libbey and Co. Ltd., London. 158 pages. \$77 Cdn. approx.

This is another in the genre of multi-authored monographs based on lectures given at a course, in this case one on epilepsy held in Sicily in January, 1992. With the exception that the print is too small, there is nothing inherently wrong with this book; however, I found it a chore to get through and would have preferred to attend the lectures. The 40 authors are by and large, experienced scientists who describe their own and others' work to review "the basic mechanism of epilepsy with special emphasis on seizure-induced cellular damage in the developing brain". Half of the fourteen chapters discuss current thinking (current being 1991-1992) about mechanisms of focal or generalized epilepsy and the other half review epileptogenesis in relation to brain maturation. Despite the title of the book, only one chapter deals specifically with excitotoxicity. The quality of individual chapters varies from poor to very good. This is not a book for the novice since most authors assume a familiarity with the subject which I suspect many will not have. If you know what the "CA₃ region" is or a "dendritic Na spike", then you should not have a problem. Among the more interesting general themes reviewed are: 1) epileptogenesis relates to one or a combination of intrinsic neuronal membrane defects, decreased synaptic inhibition or increased excitation, 2) considerable regulation of generalized epileptogenesis occurs in subcortical regions, 3) inhibitory systems develop later than excitatory ones during maturation, 4) kindling occurs more readily in the immature brain, 5) glutamate is necessary for brain development but paradoxically restricts brain growth if released in excess during seizures. Diehard fans of basic mechanisms of the epilepsies, university libraries and possibly the authors' mothers will be the main purchasers of this book. The rest of us are better advised to borrow it if required from one of these sources.

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WOMEN AND EPILEPSY. 1991. Edited by M.R. Trimble. Published by John Wiley & Sons Ltd. 285 pages.

This is a book based on a meeting about women and epilepsy, but it goes much further than a report of conference proceedings. It includes 16 chapters by different authors on the theme of aspects of

epilepsy of particular interest for women patients, as well as the short transcripts of four discussion sessions from the conference which add a few more personal ideas.

The first section addresses the psychosocial problems of women with epilepsy. Susan Usiskin's chapter which provides a patient perspective of the impact of epilepsy on the female child, adolescent, marriage, pregnancy, motherhood, employment and menopause is clearly written and includes many practical suggestions paramedical workers in the epilepsy clinic will find valuable.

In the second section the epidemiological facts regarding sex differences in different types of epilepsy, and developmental differences between the sexes are reviewed. Sheila Wallace and John Pellock follow with a chapter addressing the epileptic syndromes of childhood and adolescence and the particular problems of the adolescent female with epilepsy.

In the third section there are some clinically very useful chapters about the pharmacokinetics of anticonvulsants and oral contraceptives, and alterations in seizure thresholds due to hormonal changes. The subjects of catamenial seizures and teratogenesis in pregnancy are covered separately in excellent reviews by Pamela Crawford and Mark Yerby respectively.

In the last section the topics of sexual seizures, cognitive differences between males and females with epilepsy, depression in epilepsy, and pseudoseizures are each considered. The final chapter is the only one by the editor Michael Trimble, and gives some interesting historical vignettes of some famous women who were thought to have epilepsy.

This book can be recommended as a useful and interesting addition to the epilepsy literature providing a unique approach to a common subject. The book is well indexed, the references are comprehensive and the chapters mostly are easily readable. It provides both practical and provocative information for the clinician and paramedical worker caring for patients with epilepsy.

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NEUROMOTOR MECHANISMS IN HUMAN COMMUNICATION. 1993. By Doreen Kimura. Published by Oxford University Press. 197 pages. \$55.95 Cdn.

This is a monograph in the Oxford Psychology Series by a respected researcher in neuropsychology. I have long been a fan of Doreen Kimura's work on cerebral organization of motor function, and this book did not disappoint.

In this short volume, she presents a number of hypotheses for which she forcefully argues. The main themes are that the left hemisphere is specialized for motor selection of both oral and manual musculature, that this specialization is very similar for both the movements involved in communication and other movements, and that the motor programming systems have strongly influenced human communication. Presenting evidence that lateralization of function is found in many other species, she further argues that lateralization is not tied to the presence of language or other "higher level" functions. Taking the view that traditional aphasia typologies are largely based on highly selected cases, she presents evidence that the anterior and posterior speech systems represent control systems for single or multiple oral movements, be they speech-related or not. Systems for manual praxis are thought to overlap

with the systems for oral movements, and are especially important for control of movements within personal space.

Also in this book she deals with constructional ability, manual sign language, non-right-handedness, sex differences in brain organization, and semantic processing. Some of her provocative points: manual sign language aphasia may be synonymous with apraxia; in woman anterior brain regions are more critical than posterior; in men there is a more even distribution of these functions between anterior and posterior brain regions but in general the posterior regions are favoured; the left hemisphere is not essential for semantic processing and in fact the right hemisphere may be dominant for semantic function when the task is nonverbal.

There is more in this book to capture attention and provoke thought than in many books three times the size. Something must be sacrificed in writing such a book, and the author explains in the first chapter that exhaustive literature reviews would not be attempted. This seems to have resulted in greater inclusion of evidence supporting her views, with at times little mention of the evidence against. For example, there is evidence from a variety of sources (human lesion and cerebral blood flow studies, monkey single cell studies) that there is bilateral frontal involvement in performing or programming unimanual movements in personal space, very much like the ones for which she argues there is unilateral left frontal involvement. This selectivity is understandable (presenting the contradictory evidence and then arguing against it would make the book much longer), but it does put the critical reader who is not well-versed in the field at a disadvantage.

This book is clearly written and concise, with little redundancy. I think it is one of the few books which justifies reading from cover to cover. It is not for someone wanting a casual introduction to the topics at hand, but I recommend it for those with an interest in praxis, language, and the biological and evolutionary underpinnings of complex behaviour.

VESTIBULO-OCULAR REFLEX AND VERTIGO. 1993. Edited by James A. Sharpe and Hugh O. Barber. Published by Raven Press. 416 pages. \$138 Cdn.

This book attempts to present the most current information on the vestibulo-ocular reflex and vertigo. Although it is the desire of the Editors and the 50 contributing authors to present information that is practical and clinically oriented the main thrust of the book has been the review of current research in the area of the vestibular system, in particular the vestibulo-ocular reflex.

The book is broken down into five separate areas: 1) Clinical Anatomy and Physiology of the Vestibulo-Ocular Reflex. 2) The Otolithic-Ocular Reflex. 3) Smooth Eye Movements and Visual Vestibular Interactions. 4) Nystagmus. 5) Vertigo: Diagnosis and Treatment.

I thoroughly enjoyed reading this book and found the mixture of research tools for investigating the vestibular system including both vestibulo-ocular reflexes, otolith-ocular reflexes and smooth eye movements quite valuable.

The section on nystagmus was good and included some specialized tests that are used for assessing nystagmus including head shaking nystagmus. There was a chapter devoted to end point