

pathological changes in syphilis, subacute combined degeneration, poliomyelitis and Friedreich's ataxia but not cervical spondylosis or trauma. Approximately the same amount of coverage is given to hereditary disorders of lipid metabolism as to head injury. The selection of spinal fractures is representative rather than extensive. Almost all of the neuropathology presented could have been presented a decade or more ago and little attention is paid to recent advances in molecular neuropathology. For example, spinocerebellar atrophies and hereditary peripheral neuropathies are classified eponymously by symptoms rather than by the underlying genetic defect. In this respect, the claim on the back cover that the book provides "updates on rapidly evolving research and clinical advances" is difficult to justify.

As stated by Bryce Weir in his foreword, the book could be very useful to a medical student or resident preparing for a multiple choice examination. It fills a niche in complementing textbooks with a more systematic, contemporary, and clinical approach.

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**LIMBIC SEIZURES IN CHILDREN. MARIANI FOUNDATION PEDIATRIC NEUROLOGY SERIES: 8.** 2001. Edited by Giuliano Avanzini, Anne Beaumanoir, Laura Mira. Published by John Libbey & Company Ltd. 258 pages. C\$102.00 approx.

This book has 27 chapters based on a colloquium "to outline the specific expression of epilepsies involving the limbic structures in children and to establish a consensus on the evidence relevant to the clinical management of these epilepsies". The book is technical and not an easy read. It will likely be of interest to experts in epilepsy centres but not to the more casual reader.

The organization of the chapters is a bit unclear. The first four chapters are devoted to the anatomy, circuitry and some of the basic epilepsy pathways in the limbic system. We learn that malformations in the temporal lobe can allow seizure discharge to jump from the allocortex to the neocortex. The embryology of the limbic system is discussed but developmental aspects of limbic neurophysiology receive little attention.

Next a chapter by Spencer and colleagues defines the clinical syndrome of mesial temporal lobe epilepsy and suggests that it may be different in adults and children. They suggest that mesial temporal sclerosis is a progressive lesion because the sprouting of mossy fibers is seen in adult pathology but not in early childhood.

Chapters 6 through 11 concentrate on various clinical features of limbic seizures and generally conclude that these features are often seen in children. There is a masterful analysis of "loss of consciousness" versus "loss of contact" as the defining feature of complex partial seizures by the late Claudio Munari who was known for his provocative questioning of our current terminology and classification. Vegetative, motor, autonomic, language and motor manifestations are discussed in separate chapters. We learn of perisylvian spread, involvement of the insula, and distinctions between frontal and temporal seizures.

There is a short review of the role of febrile seizures as the cause of mesial temporal sclerosis. Given the huge amount of controversy about this issue over the past 50 years, it was disappointing not to see more. In particular, the issue of dual pathology is mentioned but not amplified.

A series of chapters focus on memory disturbance, psychic experiences and perceptual/intellectual issues. The famous series of

Ounstead is critiqued for selection bias and the large proportion of children with mental handicap. Ictal depth recordings, SPECT and MRI are described.

Even though a major aim of the book was to analyze treatment, there is only a single chapter devoted to medical therapy in children. Unfortunately there are few randomized trials to turn to, especially with newer medications. A four-page chapter discusses surgical treatment without any references or literature review. A rambling chapter tries to come to grips with the presence of benign limbic epilepsy in childhood.

In general, the illustrations are good. The pitch of the text, especially for the summaries, is very small – bifocals are needed! The vocabulary is sometimes challenging often without definitions – loco-regional, horripilation, recurrent collateral sprouting, rubefaction, projective motricity, intercritical discharge – to name a few. The book struggles with the relatively small literature on this subject that is truly related to children. Most clinical series have fewer than 20 children and many of the chapters concentrate on fewer than 10 studied cases. Most of the cases discussed come from outstanding European expert centers that focus on intractable epilepsy. There is apparently much less written about the more common, controllable limbic epilepsies in children. At least half of the book emphasizes experiences with adults.

My enthusiasm for this book is somewhat limited. It does, however, point out the need for more careful studies, particularly clinical studies, of partial epilepsy in childhood. It is apparent that we need better definitions, better methods of investigation and above all, more collaboration in randomized treatment studies.

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**PATHOGENESIS OF NEURODEGENERATIVE DISORDERS.** 2001. Edited by Mark P. Mattson. Published by Humana Press. 294 pages. C\$211.20 approx.

The title of this book is somewhat misleading. First, it does not deal exclusively or comprehensively with disorders typically classified as "neurodegenerative". Second, it does not cover disease pathogenesis in a broad sense, but focuses quite specifically on a few final mechanisms of neuronal cell death. The first two chapters provide good overviews of the molecular and biochemical events involved in apoptosis and oxidative injury. Each subsequent chapter deals with a specific neurologic disease, in detail. Although a few of the authors provide a more balanced view, most concentrate on cataloguing the markers of oxidative stress and/or apoptosis which have been identified in postmortem tissue with less emphasis on the preceding events which are probably more disease specific. Individual chapters are devoted to Alzheimer's disease, Parkinson's disease, Huntington's disease and amyotrophic lateral sclerosis, however, there is no mention of dementia with Lewy bodies or less common neurodegenerative conditions such as Pick's disease, progressive supranuclear palsy, or the multiple system atrophies. While the chapter on ischemic stroke helps to define the importance of oxidative injury in the broader scope of neurological disease, the final two chapters dealing with spinal cord injury and Duchene muscular dystrophy seem out of place. The text is well-referenced and illustrations are limited to a few useful diagrams and flow charts. I agree with the Editor's opinion that this text will be a useful

reference for graduate students and postdocs beginning a research career in this specific area, but feel it is probably too focused and unbalanced to be of general interest to senior scientists and clinicians.

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**ALZHEIMER'S DISEASE AND RELATED DISORDERS ANNUAL 2001.** Edited by Serge Gauthier and Jeffrey Cummings. Published by Martin Dunitz. 216 pages. C\$87.00 approx.

What is common to -pleated sheets and PET therapy or to axial FLAIR and the neuropsychology of the capacity to consent? Well, it is all in a day for those specializing in dementia and for the editors of an annual collection of reviews and essays in this field. This is the second annual collection edited by Gauthier and Cummings (unfortunately, contents of the first annual collection are not listed) and is as eclectic as any deliberation in the field or indeed as in any field in medicine. The untoward deterioration of manifold higher brain functions with aging now has the attention of clinical professionals and researchers from a remarkably wide range of disciplines that reflect the complexity of both the etiology and pathogenesis and management. This management in wide measure needs to consider the social setting of the affected individual. Early chapters address etiology and pathogenesis and pharmacotherapy of particular interest to neurologists and neuropathologists; three chapters address depression, behavioural manifestations of interest to neuropsychiatrists and psychiatrists, and a final chapter addresses geriatricians and family physicians caring for patients in the later stages of debility. I first read chapter 3 by Scheltens on neuroimaging, hoping for clarification of the indications in diagnosis. Recent studies of mesial temporal atrophy, regional cortical atrophy and white matter change have given conflicting results that suggest that findings will mainly support what is clinically obvious. Although research studies superimposing MRI and PET or SPECT appear to give greater precision in detection of Alzheimer's disease, guidelines of the American Academy of Neurology recommend against use of metabolic imaging in daily practice. There is room for considerable skepticism about the value of imaging of conditions where multiple pathologic processes appear to intersect. One of these processes that I suspect enters discussion in the memory clinic infrequently, amyloid angiopathy, is thoughtfully reviewed by Vinters. We learn that the amyloid does not form in the vessels of the white matter although leukoencephalopathy is seen in some forms. We also learn that 5% of patients dying with Alzheimer's disease will be found to have cerebral hemorrhages.

The possibility that effective disease-modifying therapies are in sight is reflected in two chapters. The first by Cole provides a detailed discussion of mechanisms of amyloid formation and disposal and the second by Peterson reviews "mild cognitive impairment", the term used to include subjects exhibiting the earliest manifestations of Alzheimer's disease and most likely to benefit from these therapies. This latter syndrome is identified through clinical judgement and the development of a definition suitable for clinical studies will require some ingenuity. One of the editors, Gauthier, reviews studies of cholinergic agonists that have been overshadowed by the recent success with cholinesterase inhibitors. It is too early to abandon this approach to symptomatic therapy. The other editor, Cummings, contributes to one of three chapters updating well-trod approaches to diagnosis and therapy of

depression and the psychosis and agitation in dementia. Correlation of behaviour with the anatomy of neurodegeneration in the different dementias provides insights of potential use in therapy. The penultimate chapter by Marson and Briggs provides an informative review of competency and its neuropsychologic assessment in dementia, citing their recent studies in this new field research. Volicer's chapter, perhaps unavoidably, last reviews issues in management arising in the late stages of dementia. Few patients die in a persistent vegetative state so that provision of meaningful activities and sensory stimulation is a requirement for most patients. Among medical, behavioural and caregiver issues, I found that his discussion of tube feeding very informative.

Professionals interested in dementia will find something of interest here in their own fields as well as enlightenment in the related disciplines. Unlike other annual collections of reviews, this one is well-indexed. I found some irritating redundancy in exposition, suggesting a need for greater use of the red pencil by senior authors and editors. Figures are well-reproduced (chapters 2 and 3), except that a blow up of medial temporal lobe images in chapter 3 would have been helpful.

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**BASAL GANGLIA AND THALAMUS IN HEALTH AND MOVEMENT DISORDERS.** 2001. Edited by K. Kultas-Ilnsky, I.A. Ilnsky. Published by Kluwer Academic/Plenum Publishers, New York. 378 pages. C\$142.50 approx.

This text is notable for the authors selected. There is a "who's who" of movement disorders beginning with Anne Young, Jack Penney and Mahlon DeLong and including the Toronto Western Hospital group (including Jonathan Dostrovsky, William Hutchison, Karen Davis and Andres Lozano). Do not be put off by the dry title. There is vertical integration from basic science to clinical application. For those who wondered how pallidotomy works in Parkinson's disease when the classic model of basal ganglia predicts chorea or excessive movement, the answers are approached in these chapters.

There is logical division of the formidable topic into Historical Perspectives, Anatomical and Functional Organization, Neurotransmitters, Receptors and their Role in Motor Behavior, Movement and Sleep Disorders, Plasticity in Movement Disorders, Neuronal Activity in Movement Disorders, Mechanisms and Efficiency of Novel Treatment for Movement Disorders. Each section is further divided into chapters that touch upon every aspect of basal ganglia and thalamic circuitry and their implications in movement disorders.

The chapter on microcircuits could benefit from more diagrams, the text itself being quite dense. Whereas, the chapter on local and efferent neurons has lavish histochemistry panels that add to its comprehension. The editors' chapter dealing with primate organization and connection of the motor thalamus is well-organized and well-written. The subject matter is key to understanding the organization of the basal ganglia and thalamus.

The sections on plasticity in movement disorders and neuronal activity in movement disorders deal with primate and human studies. These findings explain much of the paradox of the classic basal ganglia model. Finally, there is a brief transcript of discussions from the meeting on which this work is based.