

or single case reports, so that now over 60 lacunar "syndromes" have been described, with varying authority. Thus a book surveying the confused terminology of the subject, defining the pathology and clinical presentations of all the recognized small deep infarcts of the brain white matter, and discussing the natural history of the condition, is timely; and we are fortunate that here it is done so well.

Dr. C. Miller Fisher contributes the second chapter – a personal view of lacunar infarcts – in which he provides his present view of their commoner pathologies. As is characteristic in larger minds, his opinions have changed over the years. It is unfortunate and quite unnecessary in an academic work that bald refutations should have been allowed to remain in the texts of subsequent authors. Academic disagreement is appropriate and stimulating but better writers eschew rudeness.

Small, deep infarcts also lead to clinical syndromes which, though reasonably characteristic, are less-well recognized than the pure motor, pure sensory or sensorimotor strokes, or the ataxic-hemiparesis/dysarthria-clumsy hand syndrome(s). Single chapters in this book review the presentations and pathology of striatocapsular, caudate, thalamic, centrum ovale, internal watershed and deep cerebellar infarcts and delineate also those resulting from anterior choroidal occlusion. Certainly not all of these are lacunar syndromes, but they warrant and receive appropriate attention, given the title of the work.

Is it a paradox that the whirlwind speed of CD-ROM should, but does not, allow the most efficient access to specific data contained within a data-mass? The fable of the hare and the tortoise trudges to mind. This book would probably cost less on a platter, but the speed of the processor always overwhelms the orderly progression of logical human thought and inhibits memorization. The reader who spends rather a lot of money on this useful book will possess a complete reference source to consult when a patient with a deep white matter infarct is seen, and will enjoy browsing – but the similarities between the features of lacunar and major occlusive strokes and the present deficiencies in therapy for each do rather remind one of the letter sent by a child to her aunt thanking her for the present of a book about elephants ". . . which tells me more about elephants than I wanted to know." Experts allowing free flow to their knowledge may dissect the anatomy of a disease more minutely than the condition warrants. Does it really help to define *classical*, *partial*, *extended*, *occasional* and *multiple* lacunar syndromes? And if so, how?

Neurologists with a special interest in stroke will certainly want to own this book; but for the majority I suggest that they recommend it – quite strongly – to their medical librarian as a worthy acquisition; and they should be the first to read it, for at the least the information gleaned will let them give a more sapient prognosis; the chapters on MRI and on striatocapsular infarcts are superb; and the sometimes sloppy grammar and spelling are minor irritants.

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EPILEPTIC SEIZURES AND SYNDROMES. 1994. Edited by P. Wolf. Published by John Libbey and Company. 678 pages. \$C140.00.

Despite a huge cast of authors, this book is easy to read and

admirably combines clinical themes with reviews of clinical, laboratory and animal research.

The book is divided into seven well organized sections. Section 1 addresses important issues in the classification and terminology of both seizures and epileptic syndromes. The second section deals with some of the less well recognized syndromes, such as the reflex epilepsies, and effectively uses clinical illustrations. Within this section are chapters which deal with the presently recognized absence syndromes and an additional new syndrome with perioral myoclonia and absences. The book is enhanced by chapters, which express the opinions of experts, such as Dr. Andermann who argues that absences are non-specific symptoms of a variety of etiologically and anatomically diverse processes.

Section 3 reviews the idiopathic epileptic syndromes. The genetics of epilepsy and gene mapping are discussed. Benign neonatal convulsions, West syndrome, "grand-mal on awakening" and numerous other syndromes are covered. There is an excellent chapter on the extent of our knowledge of benign epilepsy with centrotemporal spikes. Other chapters deal with other well recognized syndromes and syndromes which are either less well known or newly described. There is also an excellent discussion of the generalized epilepsies and idiopathic localization related epilepsies as part of a continuum.

The fourth section: "symptomatic and cryptogenic epilepsy syndromes" has chapters on the Lennox-Gastaut syndrome, Rasmussen's encephalitis and seizures from each of the cortical lobes. Section 5 is entitled "epileptogenesis and ictogenesis: epilepsy as a dynamic process". Among the best chapters in this section is one which deals with the potential association between febrile seizures and mesial temporal sclerosis.

Section 6 addresses intractability and some of the newer therapeutic strategies. The final section is devoted to psychogenic seizures and psychotherapy.

Overall this book is well written and provides insights into the limits of our knowledge of important topics which we encounter daily. This book deserves a place on the shelves of all who care for patients with epilepsy.

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MOLECULAR NEUROPATHOLOGY. 1995. Edited by Gareth W. Roberts and Julia M. Polak. Published by Cambridge University Press. 189 pages. C\$49.00.

This relatively short publication aims to provide an introduction to the essential techniques required to study the molecular biology of human brain diseases. The book is multiauthored and divided in two sections. The first is devoted to basic techniques and the second to applications. The technique section opens with a short chapter which presents the general principles of brain banking; it is superficial and not very informative. Possible contacts and resources in Europe, the U.K. and North America are omitted. The chapter on RNA isolation and analysis is very good but becomes quite technical at times. The segments on the polymerase chain reaction, in situ hybridization, immunohistochemistry and autoradiography are well written and fulfill very well the stated aim of the editors. Part 2 includes excellent short chapters on transgenic mice, cerebral transplants and image analysis. Two review chapters are also included, one

on prions and the other on cerebral amyloidosis; while well written, their references are for the most part anterior to 1992 and important new information such as the interaction between ApoE and amyloid is not included. It is important to note that the book is biased towards degenerative diseases and excludes other areas of human disease where molecular techniques have greatly enhanced our knowledge and are now assuming diagnostic importance such as brain tumours and mutations in myelin related genes. The concept of trinucleotide repeats is not discussed. None of the techniques related to protein alterations are presented (protein purification, gel electrophoresis Western blotting) leaving out the entire topic of cytoskeletal changes in human neurodegenerative diseases. Finally, the techniques related to cell death/apoptosis are covered. This book will be useful mainly to clinicians who wish to become familiar with the basic molecular techniques currently used, keeping in mind that the topics covered are quite selective. Those who are actually contemplating the possibility of setting up molecular techniques to study human brain diseases should refer to more detailed publications and "how to" books.

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**BIOPSY DIAGNOSIS OF PERIPHERAL NEUROPATHY.** 1995. By Gyl Midroni and Juan M. Bilbao. Published by Butterworth-Heinemann. 477 pages. \$C208.00

I quite enjoyed this new atlas of nerve biopsies by Midroni and Bilbao. There are a number of very positive features about this book that suggest it should be included in all neuropathology laboratories and in the libraries of neurologists interested in peripheral nerve disease. Unlike several books about peripheral nerve there are more photographs than words and the photographs are of superb quality. This is exactly what the field needs, i.e., a pictorial "tour de force" of nerve biopsies from a lab with a great deal of experience in the area. In my mind there aren't any texts quite like this. Its closest rivals are either largely text or particularly EM. The pages are large allowing the illustrations to be very well portrayed. An additional plus is also the inclusion of a segment with clinical information on each of the conditions presented. Many publications on peripheral nerve disease fail to include such nice combinations of semi-thin sections and EMs. I particularly enjoyed the sections on sarcoidosis, vasculitis and lymphomatoid granulomatosis. To visualize these conditions in the past it would require digging through reprints.

It is the bias of these authors that they do not emphasize teased nerve fibres, although there are some pictures in the text. I think these are well illustrated in other texts. As the field progresses, a text like this and others will probably include more immunohistochemistry but there is some in the text and frankly I really wouldn't want to displace the other pictures because it would distract from the comprehensiveness of what is included.

The authors present their viewpoints on usefulness of nerve biopsy and some interesting information to help guide clinicians as to when biopsy may or may not be as helpful. Of course, some of this is subjective and based on their particular experience but these are important questions that need to be addressed.

We have been waiting for a text like this for a while now,

expecting it to come from the authors of some other well known peripheral nerve books. I am pleased that this group, with its depth of experience has shared the images with us.

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**NEUROBEHAVIORAL PLASTICITY.** 1995. Edited by Norman E. Spear, Linda P. Spear, Michael L. Woodruff. Published by Lawrence Erlbaum Associates, Inc. 472 pages. \$C104.00.

This book consists of papers presented in honour of Robert L. Isaacson by his former students and collaborators in research at a symposium held in association with a 1993 meeting of the International Society for Neurobehavioral Science. The papers fall under three main headings, namely, the relationship between the limbic system and behaviour with an emphasis on learning and memory, the phenomenon of neuroplasticity controlled at a molecular level including changes after brain damage and, thirdly, the neural and chemical determinants of normal and abnormal behaviour. In the first part, the papers deal with the effect of hippocampal lesions on conditioning to complex non-spatial events, with a quantitative model for the assessment of processing of temporal and spatial information by the hippocampus and of the effect of lesions, the experimental effects of the injection of a cholinergic antagonist or a GABA-ergic agonist into the medial septal area on maze behaviour, an innovative technique for assessing memory after short retention intervals in rodents, a review of the research and conclusions of the neurophysiologic analysis of limbic function in the Buzsaki Laboratory, the consequences of lesions in the septal area and experiments on the relationship between neurotrophic factors in the hippocampus in rats and Alzheimer's disease.

The papers on plasticity in behaviour and the brain discuss the modulatory memory system as demonstrated by McGaugh's Laboratory and the central role of the amygdaloid complex, the evidence for varieties of synaptic change derived from experience, the application of neural grafts and other techniques as treatment of experimentally-induced brain damage, the puzzling effects of implanting fetal tissue into the damaged hippocampus of adult rats, the advances in understanding of neuroplasticity through the techniques of neurochemistry and molecular biology, experiments aimed at trophic factors that mediate neuronal plasticity and the role of hormones associated with stress as studied in the laboratory of Bela Bohus and their observations on kindling in the dorsal hippocampus and amygdala which result in measurable neurophysiologic and behavioural changes.

The third part contains papers which deal with an experimental rat model of fetal alcohol syndrome, a study of the age-dependent effects of early disruption of the dopamine system, a review of the issues and evidence with respect to the four major neural transmitter systems (adrenergic, serotonergic, dopaminergic and cholinergic) and their role in combination with the brainstem for cognition, the effect of neuropeptides on cognitive behaviour in rats and in humans, the phenomenon of reinforcement and the suggested interaction of the amygdaloid complex, the hippocampus and the ordering effect of the prefrontal cortex, the application of animal research to a greater understanding of Alzheimer's disease in which analogous perseverative